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CONSUMPTION CURABLE,

AND THE MANNER IN WHICH

NATURE AS WELL AS REMEDIAL ART

OPERATES

IN EFFECTING A HEALING PROCESS IN

CASES OF CONSUMPTION,

EXPLAINED AND ILLUSTRATED BY

NUMEROUS REMARKABLE AND INTERESTING CASES,

TO WHICH IS ADDED,

A MODE OF TREATMENT,

BY WHICH

THE DEVELOPMENT OF TUBERCLES MAY BE PREVENTED

IN PERSONS LIABLE THERETO,

FROM HEREDITARY PREDISPOSITION, OR A BAD STATE OF THE SYSTEM,

INDUCED BY VARIOUS CAUSES.

“La guérison dans les cas de phthisie pulmonaire où l'organe n'a pas été entièrement envahi ne présente, ce me semble, aucun caractère d'impossibilité, ni sous le rapport de la nature du mal, ni sous celui de l'organe affecté.”—Tom. ii, p. 112.

Laennec, Nouvelle Edition.

BY

FRANCIS HOPKINS RAMADGE, M.D., F.L.S.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,
SENIOR PHYSICIAN TO THE INFIRMARY FOR ASTHMA, CONSUMPTION, AND
OTHER DISEASES OF THE CHEST, AND
LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE, ETC.

L O N D O N,

LONGMAN, REES, ORME, BROWNE, GREEN, AND LONGMAN,

PATERNOSTER ROW.

1834.

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

BY

JOHN BURNET

OF

THE

UNIVERSITY OF

OXFORD

PREFACE.

MOST men have some one darling wish, which forms the central point to which all their ideas and feelings verge. ' My attention was directed at my outset in the profession, to that tremendous disease, which, from its wasting effects on the human frame, too truly and appropriately bears the name of Consumption. I found those to whose experience I looked to direct and guide me, themselves walking in the dark. Books only displayed to me a mass of crude, ill arranged, unreasoned upon facts, or the fanciful chimeras of medical visionaries. I saw that those branches of the science, (to which I purposed resolutely devoting my best energies) which had been redeemed from the wastes of empiricism, and brought within the pale of art, had been indebted for this successful issue to the system of induction which owns BACON as its father. The assemblage of facts without classification, and this last without careful investigation of specific differences might, and did, I perceived, pass for labour and observation, but was cer-

tainly not science. I felt mortified and degraded at the utter inefficacy of medicine, and of medical art, in this the commonest of diseases ; and I was soon convinced that the only means of rescuing my profession from this “darkness visible” was to make the physician subordinate to the anatomist. I had yet a higher object in view—that of mitigating human suffering. I have toiled to this end, and what I felt to be my duty has been my reward. In no boastful spirit do I speak, but in a thankful one. I have proved that there is a cure for what has hitherto been deemed incurable ; and this, no drug known but to its compounder, but a simple mechanical process available to all. That which has been as yet confused, is, I would hope, rendered clear ; and I trust that modes of treatment resulting up to this period, from conjecture, and leading but too often to confirm the disease they were intended to cure, will soon pass away with other exploded practice, that now moves but our pity or our disgust.

F. H. RAMADGE.

24, Ely-place, March 20, 1834.

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ERRATA.

Page 1 For *several* read *severe*.

40 For *opposition* read *apposition*.

48 For *respiration* read *expiration*.

— For *respiratory* read *expiratory*.

123 For *pulmonary organs* read *organ*.

MAYHEW, ISAAC, AND MAYHEW, HENRIETTA-STREET, COVENT GARDEN.

INTRODUCTION.

I AM induced, from my long connexion with the Infirmary for Asthma, Consumption, and other Diseases of the Chest, the only institution of the kind in this country, and as far as I have been able to ascertain, in Europe, to publish my opinions on the treatment of Pulmonary Consumption; a disease unfortunately too well known to the inhabitants of this clime, by its prevalence and fatality. Having been thus for nearly fourteen years placed in a situation which has given me superior opportunities of seeing numerous cases of this disease, I conceive it a duty I owe the public, through whose philanthropic aid and benevolence the above charity has been long and liberally supported, to present them with the

fruits of my experience, and unreservedly to state how far medical art is capable of arresting a disease to which nearly one-third of the adult population falls a sacrifice.

The success which has hitherto attended the treatment of phthisis, has added but little to the reputation of the medical profession. I am fully satisfied, however, daily engaged as I have been for so long a period, in treating this important malady, as well as from observations, the result of unremitting pathological research, that it is in our power to adopt a line of practice more scientific, and successful, than that which has hitherto been employed.

Though great attention has been bestowed by several distinguished continental writers, especially by Laennec, Andral, Louis, and others, on the physical signs and morbid appearances of consumption, and though cases have been minutely detailed by them in which nature has effected a cure, still they seem to me to have little idea that we can do more than relieve indications purely symptomatic.

In this country, a modern writer on consumption, the late Dr. Young of St. George's Hospital, who did not pay that attention to morbid anatomy, so commendable in our Gallic neighbours, but whose opportunities of treating the disease were considerable, favours us with an opinion as to its curability, which is very discouraging. He says, "It is probable that without assistance, not one case in a thousand of the disease would recover; and with the utmost power of art, perhaps, not more than one in a hundred will be found curable." It is my intention, in the succeeding pages, briefly to shew that this statement is unfounded in fact; and that medical treatment has, in not a few instances, tended to prevent, rather than advance recovery. I trust I shall demonstrate, in the histories of some of my cases, that recovery has been owing, in a great measure, to the supervention of some catarrhal disease occurring spontaneously through an apparently imprudent exposure to cold, after remedial agents had failed.

The reader will perhaps learn, with some de-

gree of surprise, that no inconsiderable number of the cases of pulmonary catarrh, and of habitual asthma, are the sequelæ of the disease, which forms the subject of this work, more or less perfectly cured. Had the learned Doctor, whose name I have so recently quoted, been at the pains to investigate the primary symptoms of those disorders, he would have found, in many instances, that they displayed all the common symptoms of pulmonary consumption; and had this hospital physician been accustomed to the examination of dead bodies, he would have discovered, in more than one-fourth of the adult subjects examined after death, cicatrizations indicative of cured consumption; and on finding these appearances, had he enquired of some near relative of the deceased if the individuals, at any period of their lives, had for a time expectorated blood—had been troubled with indomitable cough, nightsweats, diarrhœa, with emaciation of the body—or had been regarded by their medical attendants as consumptive, he would probably have arrived at a more favourable conclusion.

It is, indeed, strange that medical men have not noticed the non-liability of the asthmatic individual to pulmonary consumption ; and that various species of catarrh are the instruments by which nature chiefly arrests that disease. It has been observed by me for years past, and on many occasions I have particularly remarked to my pupils, that asthmatics (I mean those persons whose lungs are emphysematous, however long exposed to circumstances that favour the tubercular development in the lungs), never become consumptive. Indeed I have long found, and it is a remarkable fact, that whenever the general health has been impaired by some ailment of a chronic and incurable nature, provided the individual have a voluminous and catarrhal state of the lungs, no phthisical state supervenes, which is unhappily in too many cases the more immediate cause of death, the foregoing pathological condition not existing.

From long observation of the asthmatic state of the lungs, which is frequently witnessed on the dissection of persons, who, having recovered

from consumption, have died from some other cause, I am induced to recommend artificial means to be early employed for the healing of ulcerous phthisis. After the careful examination of at least three thousand dead bodies, and after having had under my care many thousand consumptive cases, my fixed opinion is, that ulcers of the lungs are most effectually cured, and a fresh formation of tubercles prevented, by an expansion of the vesicular structure of the lungs ; which it will be seen hereafter is, in many instances, brought on by chronic catarrh. Before tuberculous excavations have taken place, and even after their existence is ascertained by stethoscopic signs, there is an absence, except towards the close of the disease, of any catarrhal affection, or at least its continuance is only of short duration. I know this statement of the non-existence of a catarrhal state accompanying phthisis, is opposed to what appears in the excellent work of M. Laennec ; but I am satisfied of its general correctness, and that extended observations will confirm my assertions.

Independently of the extensive experience I have enjoyed through my situation in the Infirmary for Diseases of the Chest, I have to add, together with no inconsiderable share of private practice, the observations recorded by me for several years during my attendance at the Central Infirmary and Dispensary, an institution established, and in a great degree upheld, at my own expense, for all classes of diseases ; and where, from my being physician to the first mentioned charity, I had a more numerous assemblage than is generally seen in any institution of a similar kind, of cases affected with some disease or other of the chest.

It affords me pleasure to state, that my practice at both institutions has been attended by numerous and intelligent classes of pupils, who had opportunities, equally with myself, of witnessing the recovery of many consumptive persons, and of ascertaining that peculiar condition of the lungs, which I have already pointed out as invariably occurring where a cure has been effected.

GENERAL OBSERVATIONS
ON
CONSUMPTION.

~~~~~  
CHAP. I.  
~~~~~

THE mortality which takes place annually in this country through consumptive disease is a melancholy truism, although its extent, familiar as it may appear, is yet imperfectly known. The ordinary estimate, and this as I shall subsequently prove far from an exaggerated one, gives one-fourth of the deaths yearly occurring in this ever-varying climate, as consequent on pulmonary consumption alone. Dreadful as this amount seems, yet since numerous instances exist of patients labouring under chronic diseases, as cancer, several diseases of the bones, joints, &c., or any other affections by which the general system may have been deteriorated, who

owe the immediate cause of their death not to these complaints, but to the supervention of consumption, it is evident that the proportion of one-fourth, is indeed lower than the truth. Again considering the frequency of cases in which asthmatic, or catarrhal complaints, arise in the first instance from consumption, which though arrested or finally cured, occasions these very complaints as its consequences, I may fairly assume that the startling proposition I have laid down is corroborated by fact. To individuals, unaccustomed to extended pathological researches, my assertions will, at first sight undoubtedly appear rash and hypothetical. The pathologist, who is deserving of the name, will either from his own experience be ready to acquiesce in my views, or at least will candidly endeavour by further researches, to verify conclusions arrived at by the labours of years ; and this at an expense both of time and money, which none but the very few who cultivate this branch of science with the zeal and assiduity its importance deserves, are prepared to estimate.

In addition to the reasons I have just given to shew the inaccurate statement presented by the bills of mortality, I could enumerate numerous instances in which the real as distinguished from the apparent causes of the patient's death, would offer conclusive testimony to my position. Frequent are the cases in which an individual will suddenly expire after a violent expectoration of blood, and his demise be attributed to a ruptured blood-vessel, when indeed this hemorrhage has been consequent solely on latent and unsuspected phthisis. My reader must not misunderstand me to state, that every case of sudden death from spitting of blood arises from the little suspected presence of this destroyer ; but that in not a few instances, consumption is indisputably the pre-existing cause. It were easy to adduce further statements corroborative of the soundness of my conclusions ; but I have, I should think, stated sufficient to induce conviction of their reasonableness, if not of their entire validity.

It may here be worth while to inquire to what the frequency of this disease is owing, how it is

produced, and in what manner its ravages are unfortunately extended. With respect to the first of these inquiries, the prevalence of consumption has long been attributed to the proverbial variableness of our climate ; but the mode, in which this liability to change, operates upon the constitution, has not been clearly explained. However, the action of the climate on the system may be reduced to three distinct heads, each equally common, and equally fatal: checked perspiration, retaining the superfluous humours and thus vitiating the fluids of the body—constant fluctuations of health, resulting from constant atmospheric changes—and dejection of spirits caused by mental troubles. To these may be subjoined an unfortunate configuration of the body, consisting chiefly in an undue narrowness of the chest, especially in its upper part, less observable in foreigners, than among ourselves. It is not necessary to dilate upon the process by which checked perspiration lays the foundation of this dreadful malady ; since it must be evident to the tyro, that when those humours which pass off

insensibly in a healthy state of the body are retained, and the natural functions thus disturbed, disease more or less extensive will inevitably ensue. With respect to the second of these heads it may to the ordinary observer appear unnecessary to insist upon the ill effects generated by constant change of weather, in persons not only of delicate, but even of robust habits ; still, obvious as these effects are, it is not quite so apparent in what they consist, or rather how they are produced. Now, when we take into consideration the peculiarly delicate conformation of the lungs, and their immediate susceptibility of every alteration in the atmosphere, we at once arrive at a resolution of the question. It is essential in order to maintain a healthy action and proper configuration of the chest, that our inspirations should be uniformly deep and full ; but from the great inequality of atmospheric pressure resulting from the constant fluctuations of the weather, the depth and fulness of the inspiration are exposed to frequent diminution ; and that play of the chest which is as requisite to a

healthy state of the lungs, as exercise to muscular development, is consequently subject to repeated checks. Thus owing to the want of due excitement, or more strictly speaking of proper exercise, the healthy functions of the chest become deranged, its expansion is restricted, its action languid, and by degrees its shape alters, so that instead of the bony compages of the chest being forced boldly out in a somewhat semicircular form, and the sternum pushed forward, the ribs fall in, drawing the breast-bone backward in a situation nearer the spinal column than is the case in its natural movement. Now to bear out and verify the foregoing remarks by shewing how requisite the expansible power of the chest is to the healthy constitution of the lungs, I would state as almost an invariable law that the commencement of pulmonary consumption will be found to take place in the superior lobes of the lungs, owing doubtless to the small extension of the upper ribs as compared with the more complete movement of the lower. Another singular instance confirmatory of the novel view I

am now taking of the subject, is to be found in the exemption of asthmatic subjects from consumptive disorder. From the peculiar nature of their complaint, gasping for breath, and forced to inhale frequently, their lungs are ever fully exercised, and the expansion of the chest which follows as a necessary consequence, preserves the sufferer free from the attacks of this still more dreadful malady. To come to the third head, depression of spirits, or mental anxiety, we shall meet with the same cause still producing the same effects. The unfortunate who lives in the world as if he were not of it, to whom, whether his cares be the offspring of disappointed ambition, hopeless love, or ruined circumstances, the world presents nothing but a cheerless blank: the tenant of the sick chamber, whose distemper improper medical treatment has unduly prolonged, or confirmed; in fine all who from any cause labour under prostration of strength, or general debility, are prone to fall victims to the insatiable tyrant consumption, for reasons precisely similar—in-

bility to take inspirations of depth sufficient to keep up the necessary changes produced by the air on the venous circulation. I have adverted to another cause, which in my opinion contributes, at least in a degree, to render the inhabitants of this country more peculiarly liable to phthisis—a malformation of the chest, which after repeated and numerous examinations that I have been enabled to make in considerable manufactories where I had the opportunity of comparing foreigners of different countries, with our own countrymen, would seem to be more prevalent in England than elsewhere. As a corollary to the above remark, I would note that the children of consumptive parents generally inherit the narrowness of chest, and depression of the ribs which characterize the victims of this malady ; and that thus the range of its influence is indefinitely increased. I must now advert to a very remarkable circumstance, upon the propriety of advancing which I have long hesitated, yet as it serves to elucidate and strengthen, nay I might affirm to prove the truth of the proposi-

tions advanced above, and is a phenomenon as fatal in its effects as it is singular in a physiological point of view, I should after mature reflection, deem myself the slave of a false and injurious shame were I to withhold it. When we are the prey of other disorders, the desires are deadened, and lie comparatively dormant; but even in the last stage of consumption the love of the sex seems to increase with the decay of the strength, and the disease while it kills, is still propagated in the future life of an unborn being. The same holds true, though in a less degree, with respect to the gentler part of the creation. Following up the tenor of the preceding observations, we shall find that the benefit usually derived from a sea voyage, or change of air, is not so much due to the removal from an impure to a purer atmosphere *per se*, but to the stimulating effects produced on the respiratory organs, and the increased energy of the muscular powers of the chest, on which pulmonary dilatation is of course consequent. Let us compare the muscular frame, expanded chest, and robust

health of the mariner or of the husbandman, with the emaciated figure, contracted chest, and general want of vigour betrayed by the artizan of manufacturing cities; and on attentive consideration, we shall own that these differences are the consequences of the superior expansion, and activity, of the pulmonary apparatus enjoyed by the former. Amongst the most distressing, and affecting cases, which the medical practitioner has to encounter, the premature and rapid decline of the young of both sexes, more particularly of the weaker, is without doubt the most painful. The fragility of woman's constitution as compared with that of man, the delicacy of her frame, her retired and domestic habits, and the sensitiveness of her mind, all contribute to render her a mark at which consumption frequently aims his deadly darts. No sight is more painfully interesting than that of a female, on the very verge of womanhood, sinking in helpless and unconscious submission to the fatal decree, and like a drooping flower nipped untimely in the bud, graceful and lovely to the latest

breath. Independently of their greater liability to pulmonary disease from a delicacy of constitution, there exist other causes which increase their susceptibility in a fearful manner. The style of their dress, which in compliance with the fantastic usages of fashion, seems to endeavour to alter the free, and graceful outlines, traced by the hand of nature, into a wasp-like angularity alike injurious to the tender structure of their body, and unpleasing to the eye of taste,—has been often pointed out as a pregnant source of disease, and justly so. It has been already observed that a full, and free dilatation of the chest, is absolutely necessary to preserve the lungs in a sound and healthy state; but how can a female, her chest compressed by an artificial support, the convexity of the ribs incapable of being extended upwards and outwards, and the sternum consequently without the power of coming sufficiently forward, enjoy this requisite expansion? She is “cribb’d confin’d,” and “curtailed of nature’s fair proportion.” However, to counterbalance these inconveniencies, it has

been wisely ordained that owing to a power they possess of abdominal respiration, more decided in them than in the male, the unnatural restraint imposed upon them is divested of some portion of its ill effects. Still, so mischievous are the consequences entailed upon woman by her adherence to this baneful part of her costume, that in consumptive cases there is this striking distinction between the sexes, that the female thus deprives herself of the great, indeed, the sole chance of recovery, a due expansion of the chest. Thus the probability of spontaneous, and permanent recovery, which is attended by an increase in the volume of the lungs, is sensibly lessened to the female sufferer; and they who need most aid may be said "to take arms against themselves."

CAUSES OF
CONSUMPTION.

CHAP. II.

COLD, caught either by imprudent exposure to the air when the body has become heated, or resulting from the wearing of too light and insufficient clothing, is deemed one of the most general and powerful causes of consumption. Yet, in many instances, I am persuaded that the real and efficient cause is to be found in the pre-existence in the lungs of latent tubercles; and when these become softened by general indisposition, produced by the action of the cold, phthisis ensues. Still, the influence of cold is considerable, and where an hereditary tendency to consumption exists, or the constitution has been previously debilitated, it most certainly generates pulmonary disease. The transmission of this disease from parent to child, is a melan-

choly fact to which I have already adverted. The generic marks of this sad heir-loom may be traced in the sanguine yet delicate hue of the countenance, the unusual brightness of the eyes, the confined and narrowed waist, the sharp projection of the scapulæ or shoulder-blades, and the fragility of the bony structure of the body, not unfrequently united with a disposition to an unhealthy stoutness. In laying down the causes of consumption it becomes requisite to distinguish betwixt those which are direct, and the far greater class commonly confounded with them, but which in point of fact are indirect. Amongst the latter may be enumerated inflammation of the lungs, pleurisy, contagious eruptive fevers, repelled eruptions, badness, and deficiency of food, amenorrhœa, unhealthy localities, affections of the abdominal viscera (sometimes caused by excessive drinking) spitting of blood, constitutional syphilis, and a long list of disorders whose sole influence in producing consumption consists in the debilitated state of body they induce. I have said that it is requisite

to distinguish betwixt the direct and indirect causes of consumption, not that there are any that can with propriety be termed direct, but in order to impress thoroughly upon the mind the grand truth that phthisis is the sequence of debilitated bodily health alone. When the general health becomes impaired, a total change takes place in the fluids, and secretions of the body, and there is consequently an aberration of nutriment: on this the formation of tubercles soon follows.

Many writers are of opinion that various thoracic diseases are a fruitful cause of consumption; but this supposition I am satisfied is groundless, and it is merely owing to the loss of health entailed, that the development of those accidental productions, called tubercles, takes place. It would be endless to enumerate the various causes of consumption, for, in fact, whatever is capable of impairing the constitution is liable to produce a phthisical state. Thus, mental anxiety, or any depressing passion long continued, as well as chronic diseases of

various kinds, engender consumptive predisposition. In this country the frequency and prevalence of this disease are attributed in no small degree to the great and sudden vicissitudes of atmospheric temperature, and the moist nature of our climate. These operate powerfully in effecting changes in the human body more or less calculated to affect the general health, especially in those who are naturally of a delicate make, and who inherit a tendency to scrofula. Particular employments, in which dusty particles and noxious fumes are inhaled, have long been regarded as producing this disease ; but experience has taught me that some catarrhal affection and not Consumption, is what most frequently supervenes, and that the former complaint is a preservative against the latter.

Contagion has been considered, in the southern parts of Europe, especially in the Italian States, as a frequent source by which large families of children have been destroyed by Consumption. For my own part, it has never appeared to me to spread amongst individuals having the same here-

ditary constitution, by any infectious medium ; but by other circumstances operating where there was an inherent predisposition to tuberculous disease, which, as I have already said, is indicated by a particular conformation of the body ; such as a long neck, slender trunk and extremities, contracted chest, high shoulders, delicate and transparent complexion, weak voice, and great sensibility. The same locality and the same manner of living, no doubt have often an influence in propagating it in certain families ; and to this cause, and not to contagion we may attribute its remarkable fatality. In my neighbourhood there are many Italians resident, who, for the most part, live huddled together in small and ill ventilated rooms, and are apparently liable from a peculiarity of diet not very nutritive, a neglect of cleanliness, and misery and disappointment of every shape, to have a consumptive constitution, yet I have not been able to trace any case of the disease's being disseminated. Still, notwithstanding my firm belief that consumption is not contagious, I would not be understood to recom-

mend neglect in separating consumptive from healthy persons; on the contrary, for the sake of the personal comfort of the sufferer, and to forward the chances of his recovery, I would have every precaution taken that prudence can suggest, or kindness inspire.

THE SYMPTOMS OF
PULMONARY CONSUMPTION,
LOCAL AND SYMPATHETIC.
PHYSICAL SIGNS OF THE DISEASE.

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CHAP. III.  
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It has long been acknowledged that the symptoms, on which practitioners generally rely, in the incipient stage, as indicative of this disease, are extremely variable and uncertain. Its attack indeed, is, in many instances, so deceitful, that before the patient is in the least aware of his danger, the case has become desperate. Al-

though resulting from tubercles, disseminated at first in the substance of the upper part of one, or both lungs, it rarely happens that pain or any other uneasy sensation, is felt in the part which is well known to be the primary seat of the disorder. Though we sometimes see cases in which its progress is latent, and altogether unheeded, still a slight cough is generally the first symptom, and this is attributed to some uneasiness in the throat produced by a common cold. After a time the cough increases, and from being either hard or dry, is followed by the expectoration of a little mucus often devoid of colour, as in common catarrh. This is succeeded by some degree of weight, and slight pain, felt in the chest, along with difficulty of breathing, general weakness, and an accelerated pulse which seldom ranges below 90; during the hot stage of the hectic fever, it is generally 120. A sense of chillness is commonly experienced towards noon along the course of the spine; this is followed by an augmented temperature of the body on the approach of evening, and finally by perspirations,

which usually come on profusely after midnight, and greatly attenuate the body. When spitting of blood occurs with the foregoing symptoms, or when the matter expectorated begins to assume the appearance of pus, we have strong grounds to suspect the presence of pulmonary consumption. The occurrence of cough in any case, in which the general health has been impaired, ought to be regarded with no small suspicion. Cases are not wanting, in which the disease manifests itself most irregularly. For example, either mesenteric enlargement, aphthæ, severe diarrhœa, amenorrhœa, or an affection of the larynx, attended with a slight alteration of the voice, not uncommonly precedes for a short time the usual characteristic symptoms. Though in the early stages there may be some doubt as to the existence of this disease, without the aid of physical signs, there can be however little chance of mistake in the advanced stages. As soon as hectic fever is fully established, the wasting of the flesh becomes remarkable, and rapidly increases if perspiration, diarrhœa and expectora-

tion have been abundant. To me, who have been for so many years accustomed to see this disease daily, the very look of the patient is in most instances sufficient.

The nose and cheeks assume a striking prominence, and the bluish paleness, and emaciated appearance of the face are remarkable, when contrasted with the suffused and at other times circumscribed flush, which quickly goes and comes, together with the shining white, or pearl-blue appearance, of the conjunctiva of the eyes ;—the projection of the shoulder-blades (which has been noticed as resembling wings) while at the same time the chest is narrowed in its lateral, as well as transverse diameter, in consequence of the increased convexity of the ribs which has a greater inclination downwards, and which thus likewise admits of the nearer approach of the sternum towards the back. On the upper and anterior part of the chest, the intercostal spaces appear widened and depressed, and the belly is at the same time flat and retracted ;—the fingers seem lengthened, and the joints of these as of

other parts, are apparently enlarged; incurvation of the nails takes place, and where large tuberculous excavations have long existed, an actual enlargement of the ends of the fingers is observable; the neck seems elongated and impeded in its movements, and the angles of the lips are drawn back, and produce a bitter smile.

Phthisis is not a disease, difficult to be recognized, in that stage in which the tuberculous mass is softened, and finds an opening into some of the neighbouring bronchi, and lastly leaves a cavity, whose existence is clearly indicated by its characteristic symptom—pectoriloquy. This peculiar phenomenon is generally heard first in the upper portion of the right lung (where tubercles first appear) by applying the ear, when they are softened down, over the uppermost ribs, or over the infra-spinal fossa of the shoulder blade. When the voice of the patient, on the naked ear's being applied, or with the aid of the instrument called a stethoscope, to that part of the chest, corresponding with the supposed seat of an excavation, is heard much louder than

natural, and seems to issue uninterruptedly from within, with a thrilling sound, it constitutes what is termed a satisfactory pectoriloquy, and is an indubitable sign of a tuberculous cavity, the contents of which we even hear not infrequently by the same method of diagnosis, agitated by the action of coughing. Where the walls of an old, and nearly emptied excavation are dense and firm, a severe fit of coughing gives to the ear a metallic resonance, or a sound as if some empty glasses were slightly shaken against each other. Where excavations are numerous, and communicate one with another, the liquid matter within is heard changing its situation every time the patient breathes.

The plan I always pursue, and indeed a most ready one, to distinguish consumption from pulmonary catarrh, with which it is most liable to be confounded, is to apply the ear to the posterior part of the chest, about two or three inches below the inferior angle of the scapula. Here, if the respiration be almost natural or slightly puerile, we can at once, and early, proclaim the

case to be phthisical, though the patient may have a troublesome cough, and but few of the common symptoms belonging to consumption. Except near the fatal termination of the disease when the great emaciation, confirmed Hectic Fever, Diarrhœa, and other bad symptoms manifest themselves, we have no physical sign of any bronchial inflammation; save in cases in which some progress towards recovery has taken place. When the sonorous rattle occurs before the lower lobes of the lungs are affected with tubercles, it is to be considered as a highly favourable symptom, for however violent and long the cough may be in other cases, auscultation gives us no signs of the catarrhal state which precedes, and follows, complete recovery. Having daily opportunities of seeing new consumptive cases, I readily come to a conclusion by the absence of the catarrh, that they are undoubtedly consumptive, without taking the trouble to ascertain the state of the upper part of the chest. For if an individual coughs up blood or muco-purulent matter, is subject to chills, accessions of fever

and night-sweats, wastes away and complains of debility, and no catarrh is heard in the inspirations, we may be perfectly satisfied that the tuberculous cavities exist. When there is a cough which is not influenced by remedies, and the sympathetic signs of consumption, and the auscultatic results beneath the clavicles are somewhat unsatisfactory, while the lower part of the chest has the murmur of respiration almost natural, I should then, satisfied with the experience derived from exploring the chests of several thousand consumptive cases, unhesitatingly pronounce the case to be genuine consumption. In numerous instances, much to the surprise of my pupils, and of those practitioners who have witnessed my practice, I have pronounced a patient to have tuberculous disease in the superior lobes, while he exhibited no look indicative of such serious illness, but had merely an annoying cough. This prompt decision has, after I have ascertained by the ear the sanity of the respiratory murmur, and absence of bronchial irritation in the inferior part of the chest, been generally

correct. In some instances in the upper part of the chest, obscure respiration arising from tubercles and pulmonary induration; in others a tuberculous cavity, affording the most perfect pectoriloquism, has been ascertained; and on closely questioning the patient, the symptoms he has detailed have usually been corroborative of what might be termed, if we were guided by the apparently unimpaired state of health, latent phthisis.

It were easy to enter into a more full and minute detail of the symptoms which characterize this complaint, but as my present object is to elucidate the preventative and sanatory treatment to be observed, I deem it advisable to reserve many observations of a curious nature connected with this branch of my subject. However, should I have occasion to reprint this work, I may be tempted to enlarge the present chapter, and publish many interesting, and as far as my knowledge extends, original facts.

MORBID APPEARANCES
OF
CONSUMPTION.

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CHAP. IV.  
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THE most common morbid appearances met with in the lungs, are a peculiar species of accidental production, known under the specific name of tubercles. These, according to the different appearances they present, may be distinguished into two generic forms—that of *insulated bodies*, and that of *interstitial infiltration* or *secretion*. In the former are classed *miliary* tubercles, so named from their size, which usually corresponds with that of a millet seed, although they are sometimes found of much larger size. In their origin they are observed to be semi-transparent, and of a greyish colour, sometimes nearly colourless and transparent. On superficial

inspection they are apparently orbicular, but when more minutely observed, occasional angularities and anfractuositities are visible. So closely are they interwoven with the fibre of the lungs, that it is found impossible to separate them without bringing away at the same time, a part of the former. They gradually approximate to, and unite with each other, forming semi-cartilaginous groups or masses which in time acquire a light straw colour, and change into a substance of the consistency of cheese. When they thus spread and unite by intus-susception, they form what is technically denominated *crude* tubercles, or *yellow crude* tubercles. Their progress to this state commences with the appearance of yellow, opaque specks occurring generally, but by no means uniformly, as has been erroneously stated, in their centres. These tubercles increasing by degrees, either unite in the manner described above, or remain, when thus converted into the crude state, separate and isolated. A strong proof of the soundness of the principle I am anxious to inculcate throughout this work,

namely, that pulmonary consumption is seldom met with in individuals of large and expanded chests, will be found in the fact that these nodules, or tubercles, almost invariably commence in the upper portion of the lungs, which by the very structure of the thorax is their most confined part. From the summit they spread downwards, and in their single formation, will enlarge to the size of a hazel nut, although rarely ; indeed, I consider it probable that when they apparently reach these dimensions, they are not in point of fact single, but an aggregation so compacted, as to defy separation.

A second form of insulated bodies are the *granular tubercles*, first pointed out by Bayle, who regarded them as an accidental cartilaginous formation, different from tubercles ; but without sufficient reason, since on dividing them, we find that they present the same colour and opacity as the common tubercle, and their growth evidently proceeds through the same stages. Therefore I am of opinion that they are unquestionably the same. The principal difference between

the two, consists in their external form. The *granular* tubercles, are roundish or ovoid, of the size of a millet seed, which they seldom exceed ; and germinate singly in immense numbers over an entire lung, or its greater portion, so that even where apparently blended, the granules are found on examination to be entirely distinct. They differ still further, by their being transparent and colourless. Their induration and cartilaginous structure may arise, it is not unreasonable to suppose, from their remaining during a long period without shewing any disposition to suppurate, which they are sometimes however found to do.

I have stated that one of the principal differences between the miliary and the granular tubercles, consists in the latter being colourless and transparent ; yet is this not an invariable distinction, since they occur at times of a greyish tint, and are not invariably diaphanous, but in conjunction with this grey colour are also semi-transparent, thus furnishing an additional proof of their assimilation with the miliary tubercle.

The second form in which tuberculous matter exhibits itself in the lungs is that of *interstitial infiltration* ; this like the first may be divided into two classes, one of which may be denominated *grey tuberculous infiltration*, and the other *jelly-like tuberculous infiltration*. The former is found, in this the second stage of the tubercular progress, infiltrated around tubercular cysts, and incorporated, if I may use the term, with the pulmonary tissue. Occasionally it is met with in a separate deposit, independent of the previous formation of miliary tubercles, and forms large masses of a moist compact substance impenetrable by the air. Its greyish hue is derived from the secretion of black pulmonary matter in minute particles. Softening gradually in a manner similar to the insulated tubercle, it passes into a state of crudity which is indicated by minute yellow and opaque points or specks. On making a section of this mass, the matter contained in these minute specks oozes out, and there remain small orifices similar to so many holes left by the mark or prick of a pin. The

jelly-like substance, termed the jelly-like tuberculous infiltration, is discovered in the intervals of the miliary tubercles, and is for the most part colourless, although occasionally it is tinged with red. Gradually gaining greater consistence, says Laennec, it becomes converted into yellow tuberculous matter; and this indeed, according to him, at times so rapidly, that on inspecting large masses of the substance thus changed, we are often unable to find any trace of its original state. But according to my own opinions, which have been based on observations continued for a series of years, this view is altogether erroneous; since the jelly-like infiltration is, I conceive, the result of specific chronic inflammation. Nor does this jelly-like infiltration, or more correctly speaking—secretion, ever become, as far as I am aware, converted into yellow tuberculous matter. Again, the secretion, of which we are now speaking, is precisely similar to that morbid deposit frequently found beneath the serous surface of the lungs in cases of chronic pleurisy; and in chronic inflamma-

tion of the heart I have repeatedly seen the same gelatinous matter—beneath the serous investiture of the anricles and that of the ventricles, within the laminae of the pericardium, and underneath the serous surface of parts within the abdominal cavity. These facts are strong corroborations of my opinion as to the specific chronic nature of this secretion; but when we find the presence of capillary vessels, extending themselves into this gelatinous matter, which minute vessels are also traced in the jelly-like secretion of the different parts above mentioned, I think my assertion fully borne out. To extend my proofs still further I may observe, that in some severe chronic diseases of the joints, I have seen a like secretion on the exterior surface of the sinovial capsule, and extending itself to no inconsiderable distance into the surrounding cellular membrane.

The process, by which both the insulated, and diffused tuberculous matter becomes softened into a fluid state, is similar. Generally in the centre of several coalesced tubercles, and in different parts of the diffused tuberculous matter, a number of

small, yellow, opaque specks make their appearance, until by degrees the whole of the substance is converted into a uniform yellow mass, which after an uncertain period becomes softened, and is changed into thick and curdy pus. However, the consistency of this pus is by no means invariably the same, a portion assimilating to the secretion from an ordinary sore, and being thin and watery. In expediting this change in the tuberculous mass from hard to soft, the secretion from the lining surface of the membrane circumscribing it, I entertain no doubt, contributes not a little. I find in a work published by M. Lombard of Geneva, that he supposes each portion of tuberculous matter to act like a foreign body on the tissues with which it is in contact, thus producing a secretion of pus mechanically dividing the tubercle into clots; but I conceive that this gentleman attributes too much to the action of this fluid, since we find in solitary tubercle, a particle or particles of pus contained within it, and evidently not in contact with any tissue having the power of generating pus—nay

more, we find deposits of pus in the large tuberculous masses where the natural alveolar structure of the lungs is by no means discernible. When, partly by a process of irritation, a secretion of pus takes place, and to an amount sufficient to effect a solution of continuity, an opening is made into some of the neighbouring bronchial tubes, or into some tubercular cavity, of previous formation communicating with them. By this compound process, according to the foregoing view, the elimination of tuberculous granules is effected. The interior of such cavities when of large extent has columnar bands extending across it; these are formed of condensed pulmonary tissue, and they are sometimes coated with the tuberculous degeneracy; it should be observed that none of the bronchial ramifications traverse these excavations, and that the few vessels occasionally seen within the bands, are in almost every instance obliterated. In the parietes of the large anfractuous excavations of long standing, the bloodvessels are frequently observed in a flattened state, and those that are obliterated

are covered by a thin semi cartilaginous membrane. On the contrary, the bronchial ramifications, with the exception of what are necessary for the discharge of sputa, though found obliterated, and invariably discovered to be cut off, yet would appear to have been originally enveloped by the tuberculous matter, and to have traversed the space it occupies. As soon as these cavities have discharged their contents, they become lined by a soft, thin, and nearly opaque morbid membrane, or are merely invested by an exudation, which is in some parts deficient, and varies in density. At times we meet with cases in which laminae of a semi-cartilaginous nature line these excavations, of a light blue colour, with slight eminences interspersed here and there, and in intimate connexion with the pulmonary tissue, being continuous also with the lining membrane of the bronchi. At times the boundaries of the excavations are found without either of the false membranes, and are formed by the natural texture of the lungs merely condensed, or infiltrated with tubercular

matter. In concluding my remarks on the formation of the tubercular cavities, I must express my concurrence with the view taken by M. Bayle of the false membrane's secreting the pus which is expectorated, instead of being the product of the bronchial secretion. The grounds on which I base my opinion are these—primarily that no bronchial affection is perceptible until the disease is drawing to a close, or unless nature attempts to effect a cure by the intervention of catarrh; and secondarily since on dissection we find that these excavations are not frequently empty as stated by Laennec, but that in general they contain no inconsiderable quantity of puriform matter, similar to the sputa which had been ejected by the patient.

The stage of my subject at which I have now arrived, leads me to the consideration of *encysted tubercles*. Although seldom met with except in the bronchial glands, yet I have found these tubercles previous to softening, in at least a dozen instances, surrounded by an accidental membranous formation, and sometimes

by condensed pulmonary tissue. Still, seldom as this occurs, nature, ever prone to discover and apply a remedy to her own infirmities, has benignantly provided that the black deposit caused by the tuberculous irritation shall answer every purpose of a cyst. It has often happened to me to have had opportunities of examining patients of my own, who after having recovered from consumption, and enjoyed a good state of health for years, have expired of diseases not referable to the pulmonary organ. In many of these instances in which ulcers of the lungs have been transformed into semi-cartilaginous fistula, or in which perfect cellular cicatrization has taken place, I have remarked that such nodules of tubercles as then existed, have become enveloped by black pulmonary matter, which has evidently produced the same beneficial effects as would have resulted from the encysted state, by isolating them, and rendering them innoxious. Indeed I have reason to believe from enquiring into the history of many cases of persons who in their youth laboured under con-

sumption, from which they afterwards recovered, and on whose demise I have been called in to examine the body, that latent nodules in the state described above, have existed upwards of thirty years. Again, in individuals in whom consumption has been arrested by the spontaneous occurrence of chronic catarrh, or by such treatment as has rendered the disease chronic; similar nodules similarly situated, together with wrinkled depressions on the exterior surface of the lungs, signs of internal cicatrices, are of no infrequent occurrence. Without intending to enter too far into the debateable ground of speculation, I yet feel induced to observe that I regard tubercular deposition as a specific vitiated secretion arising from an aberration of nutrition. In confirmation of this opinion, I have strong grounds for believing that tubercles of very recent date, and not arrived at a state of crudity undergo absorption, and that upon this, restoration from incipient phthisis soon follows. Thus I have indicated two modes by which restoration to health from phthisis occurs, the one is

the re-absorption of tubercles in their early stage, and the other is their insulation, even in a state of crudity, by black pulmonary matter. I now approach what I consider the most interesting portion of my subject connected with the morbid anatomy of phthisis, the mode of union, and cicatrization of ulcerous excavations, which seem by no means understood. Whenever nature operates a cure, there is an extension of irritation from the lining of the cavity into the neighbouring bronchial tubes; and the consequence of this is, supposing there exist one or more cavities, in the summit of the right lung for example, since the right is the one generally first attacked, an emphysematous state of the vesicular structure of that portion of the lung, through imprisonment of the air in the act of expiration. Hence through enlargement of the aërial cells, and consequent voluminous state of the pulmonary tissue, the pressure is so constantly exerted from without inwards on the exterior of the cyst, that the result is, that in time an opposition of the parietes of the cavity takes place, and the

ulcerous excavation becomes healed by the first intention. If the healing occurs early, and the cavity is not of old date, cellular cicatrization is the consequence ; but if no pulmonary catarrh supervenes until after phthisis has existed for a length of time, the cicatrizations are generally formed of fibro-cartilaginous lamellæ, or there is left an imperfect cicatrix, with semi-cartilaginous fistula. Whenever vesicular emphysema exists, recent tubercles are rarely seen ; hence it happens that fresh crops of tubercles have no disposition to appear in the cicatrized summit of the newly healed lung ; but if after recovery of health from this change having taken place, any circumstance should arise to injure the patient's health, the summit of the other lung not being emphysematous, may be the seat of a fresh formation of tubercles ; and the fresh successive crops of tubercles may even appear beneath the emphysematous portion of the summit of the right lung, as well as in other parts. In the progress of the disease when unchecked, these crops proceed downwards by progressive

stages. No sooner has a cavity been formed in the summit of either lung, than after an indefinite period, a succeeding eruption appears lower down, so that after death the appearances presented on dissection shew the inroads of the disorder from its direst ravages, down to its latest attacks. Thus on the summit, is generally found an anfractuous cavity, surrounded by tubercles in an advanced state of crudity; somewhat lower down are smaller cavities containing portions of undissolved tuberculous matter, and around them small nodules assuming the yellow appearance; beneath these the crude miliary tubercles are apparent, having their centres already occupied with yellow points; and lastly, the transparent miliary tubercles, which form the first morbid tuberculous appearance in pulmonary consumption, occupy the inferior portion of the lower lobes of the lungs. I ought here to mention that if after tubercles are deposited, or a cavity is formed in the summit of the lung, general vesicular emphysema arises in consequence of a catarrhal affection (produced by

cold) or by irritation spreading through the ramifications of the bronchi from the seat of the disease, there will be no disposition to the formation of tubercles. This strange, and singular exception may be probably the result of the extraordinary exercise of the pulmonary apparatus, caused by the frequency of respiration inseparable from chronic catarrh and asthma. Most truly does Laennec observe what my own extended experience confirms, that tubercles are less frequently met with in the muscles of voluntary motion, than elsewhere ; and here we find a strong confirmation given by the hand of nature herself of the value of artificial means to increase the action of the lungs, and thus arrest any new development of tuberculous eruptions.

Before I conclude my observations on the morbid appearances, I deem it necessary to notice the organic changes which accompany phthisis ; many of which are entirely dependent on the particular treatment to which the patient is subjected. The intestines, more especially the small, are next to the lungs, most liable to

tuberculous degeneration, leading to the ulcerous state, which in its turn keeps up profuse and wasting purgation. This troublesome condition may be in many instances avoided by a plan of treatment, which the reader will find laid down in another part of this work. More than one-fourth, according to Dr. Lombard, in a hundred adult subjects, had tubercles in the intestines; but I have found, that under judicious management, this proportion may be considerably decreased. Being desirous, however, to see how far phthisical patients were liable to this intestinal affection, I found that out of the same number of adult subjects who came under my notice, less than a sixth part had intestinal tubercles. Yet though such was the result of my inquiry with respect to these particular cases, I cannot but allow that the relative proportion as stated by M. Lombard, is generally speaking correct. Next in order of frequency as subject to the tuberculous state, are the mesenteric, the bronchial, and the cervical ganglions; the viscus most liable to be affected after the intestines, is

the spleen ; then the kidneys, and less rarely the liver. A wide difference however in the proportions above estimated, and in the liability of the several parts to tubercles, according to the order I have just set down, is met with in young as compared with adult subjects. Thus intestinal tubercles are more rare in the former than in the latter, but the mesenteric, as well as the bronchial ganglions are much more frequently the seat of this disease in children, than in adults ; and the result of repeated examinations has proved to me, that the presence of tubercles is oftener detected in the nervous centres of children, than in those of adults. Were I to follow the bias of my inclination, I should willingly extend my remarks on this interesting branch of my subject still further ; but the plan of the present work precludes me from entering upon a more detailed notice. I am thus necessarily restricted to brevity in my observations on the principal lesions, which accompany phthisis pulmonalis. It is with no small degree of surprise that I find it stated by a French physician of eminence,

that peripneumony and pleurisy were found by him to occur in so small a proportion as one tenth of the cases; whereas I am fully persuaded that in the last stages of consumption, not less than one fourth, nor should I exaggerate by stating the proportion as greater, display on dissection, one or both of these diseases. Another strange error into which a medical writer of the same country, M. Andral, has fallen, is his supposition that peripneumony is common in the early stages of the disease, the contrary being decidedly the fact. I admit that partial peripneumonies around the nodules of tubercles are not uncommon; but the cases in which this disease occupies the lower lobes of the lungs, which are the usual seats of inflammation are rare indeed. Were phthisical patients so frequently affected with pulmonary inflammation as M. Andral describes, the duration of consumption would be wonderfully shortened. One diseased state or other of the mucous membrane, of the trachea, of the larynx, and of the epiglottis, occurs in the same ratio as pneumonia, but these

affections are of infrequent occurrence until phthisis has made considerable progress. Fortunate indeed would it be for consumptive patients to be early attacked with inflammation of some part of the great air passage, since in such case, the progress of their disease would be effectually checked. I would here particularly draw attention to an important circumstance, which if left unexplained might appear subversive of the very principles and practice I would inculcate throughout this work. It may reasonably be enquired, if inflammation of the air passage, in one part or other, oppose so completely the progress of consumptive disease, how does it happen that in numberless cases we find the first symptoms of phthisis exhibited by the patient, to consist in loss of voice, hoarseness, and in short all the apparent evidences of laryngeal affection; and yet the pulmonary affection receives no visible relief? Now, auscultative experience has clearly demonstrated to me that in cases of this kind, latent tubercular disease invariably exists in the lungs previous to this

aphonia; and that this very loss of voice, and accompanying hoarseness, are the results of a thickening and ulceration of the mucous membrane of the ventricles and vocal chords of the larynx alone, which however do not present an obstruction to the respiration so as to excite the action of the lungs, in the manner effected by catarrhal, or asthmatic complaints. Yet notwithstanding this essential difference in the character, and effects, of this distressing aphonia, and of catarrhal disorder, and although in patients thus afflicted, all the various symptoms of phthisis proceed uninterruptedly; yet through a subacute irritation in the ventricles of the larynx, at last producing a swelling of the mucous membrane which encroaches on the area of the windpipe, sufficiently to cause a slight obstruction to the respiratory process; consumptive subjects of this class, I have often observed, live at least twice as long, as the generality of those, whose disease is not accompanied by such laryngeal affection.

The stomach, liver, spleen, and pancreas de-

viate not unfrequently from a healthy state. In consequence of observing the hardness, enlargement, and other structural alteration in the liver, the late Mr. Abernethy, to whom the department of surgery owes so much, was induced to believe that consumption frequently originated in a diseased state of this organ. From this erroneous view a mode of treatment was pursued by him, calculated rather to aggravate, than lessen phthisical symptoms. By too great a reliance on the effects of mercury, he unfortunately hastened the catastrophe which he sought to avert ; and gave the sanction of his authority to a practice, which for several reasons could not be attended with other than pernicious effects. It is evident that he never reflected upon the causes, to which this morbid condition of the liver is to be ascribed.

The great venous trunks, are in consumption always congested in a greater or less degree. The cold stages of the hectic paroxysms, the tuberculous indurations, the partial pleurisies, peripneumonies, and the contraction of the chest

constantly diminishing the capacity of the lungs, retard the circulation from the right side of the heart through the lungs ; hence a gorged state of the two cavas, and congestion of the liver, the inseparable consequence of the preternatural plenitude of the inferior cava, which receives the blood of this the largest gland in the system. The anatomist, being aware that the vena porta carries the residual blood of the already specified organs through the liver, will readily account for the frequent occurrence of the morbid appearances, that are observable after death in these various parts ; since the derangement of the liver, will it need hardly be said, exercise an injurious influence on the stomach, spleen, pancreas, and the intestinal tube. Nay, it is by no means uncommon, to meet with the symptoms of subacute inflammation of these parts during life. The frequency, extent, and complication, however, of these lesions on dissection, are chiefly dependent on the treatment that has been pursued. Should depletion have been neglected, these morbid affections will necessarily be considerable,

but should the contrary course have been judiciously resorted to, they will be proportionably rarer. By way of corollary to these remarks, I may mention as a sequence of neglect in recurring to due depletion, and also, in many instances, as the result of debility, that serous effusions take place, which are the proximate cause of death. These may occur to a quintuple extent for example, in the brain, the pericardium, the cellular membrane of the lungs, the pleural sacs, and the peritoneal cavity. From repeated observations made by me, and which have never yet been subject to a single exception, I may lay it down as almost invariable that an œdematous state of the feet is an index of some internal effusion. Indeed, after death, and before dissection, whenever I observe that the extremities are swollen, I feel convinced that the presence of effusion will be one of the results of the examination. As one of the complications of phthisis, I may here mention a disposition to fistula, which Bordeu states to be of common occurrence; but according to my calculation I estimate that the

proportion does not exceed one in five hundred cases. Yet anal abscesses are far from being infrequent : on examination they do not deserve the name of true fistula. Calcareous deposits, I may here mention, are occasionally found loose in some large cavities of the lungs, and I entertain no doubt, from having seen them in imperfect cicatrizations, that they have escaped into these excavations from their containing cicatrice having been destroyed by ulceration. The general formation of these deposits, which are chiefly composed of phosphate of lime, and of traces of animal matter, is not a little curious. When the process of healing is imperfectly performed, and the constitution of the individual is possibly inclined to a chalky diathesis, a calcareous secretion is substituted for the cicatrization that remains to be finished, and a cure of the part is thus completed. And I am satisfied that in such of the bronchial glands as contain similar concretions, they supply the room of tuberculous matter, which, it is by no means improbable, is partly removed by absorption.

Mr. Abernethy has remarked in the heart, which is generally free from disease, with the exception of slight dilatation of the right ventricle, that the foramina Thebesii are frequently enlarged. However, I have never yet met with any appearances which could justify his assertion.

There remain many observations which I would gladly make public, on the morbid appearances observable in consumption, a department of inquiry to which I have devoted my entire professional life; for instance, empyema resulting from the escape of tuberculous matter into the cavity of the chest, pncumothorax, gangrene, &c. but, as I have already stated, the circumscribed limits, and peculiar nature of my work, preclude me from indulging my wishes, on this my favourite theme. On a future occasion however, it is not improbable that I may have to offer a distinct treatise on this interesting subject.

PROPHYLACTIC TREATMENT,
BY WHICH THE DEVELOPMENT OF TUBERCLES
IN THE LUNGS MAY BE PREVENTED IN PER-
SONS LIABLE THERETO FROM HEREDITARY
PREDISPOSITION, OR A CACHECTIC STATE OF
THE SYSTEM.

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CHAP. V.  
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EARLY in my practice, when consulted by patients of an hereditary bias towards consumption, it was usual with me to recommend a generous mode of living, invigorating diet, and daily exercise in the open air, with a caution to avoid every thing calculated to impair the general health. If too, it were in the patient's power to avail himself of frequent change of air, and scene, I always found it productive of considerable benefit both in a physical, and mental point of view. The advantages derivable from short excursions, or still better, voyages by sea, always invited my recommendation when circumstances rendered them available. Impregnated as the

sea breezes are with saline particles, they act, I conceive, both as stimulants of the lungs to deeper and more frequent inspiration, thus forwarding the enlargement of the chest, a point to which I have more than once adverted in the course of this work as of primary importance; and they may also be regarded as possessed of a tonic power, bracing and invigorating the surface of the body, and by continuous sympathy exerting a beneficial influence on the viscera, especially those connected with the digestive functions. Again, another strong recommendation with me to a sea voyage, in the case of persons labouring under incipient consumption, is the probability of the patient's having had his chest expanded in the manner described above, and thus becoming the subject of a slight permanent catarrh—hence bidding defiance to phthisis. With reference to a generous mode of living, it is obvious that the tendency to weakness, exhibited by individuals of consumptive constitution, calls for a method of treatment calculated to counteract the commencing symptoms. Particular rules, and limi-

tations, with respect to the dietetic management, will be specified under the head of diet. As to change of residence, a singular instance of its preventative effects, occurred some years ago in the family of a near relative of mine, formerly Colonel of a distinguished cavalry regiment, who, after the afflicting loss of two grown up daughters and a son, removed with his remaining children to Tours. Here he resided for five years, at the expiration of which period, returning to his native country, and to the neighbourhood of the place, in which the disease had first manifested itself in the children he had lost; within the short period of two years he had the affliction of witnessing the premature deaths of three other members of his family.

Celsus says, that the worst air for the patient is that which has given rise to the disease; to which we may add, that to consumptive families, the worst locality is that in which the disease has first betrayed itself.

Whilst preparing these sheets for the press,

I have met with a very striking exemplification of the value of distant removal, in families consumptively inclined, to those members whom circumstances have called from their native land. Out of a family, consisting at one period of eleven individuals, seven remaining here have fallen victims to consumption; whilst two, who displayed the same phthisical constitution as these, having removed abroad, have enjoyed an excellent state of health for many years, the one in the West, the other in the East Indies, and have continued free from any pectoral complaint.

Of the different kinds of exercise I would particularize running, and riding, as the most calculated to forward the purposes of prevention, indeed as the best general prophylactics. After a quick and brisk run, the respiration becomes frequent and deep, and the panting that thus ensues exciting the muscles of the chest, favours a healthy development of that part, and enlarges the volume of the lungs. It has been my universal practice in those schools I have been in the habit of attending, to recommend a constant

attention to this healthy exercise, and to advise the preceptors to promote it by every inducement within their power ; and I have never been disappointed by the result experienced. Nor are its happy effects confined to the mere expansion of the chest ; by the greater portion of air thus brought into contact with the venous system, the blood becomes more effectually decarbonized, the animal heat increased, the action of the heart more vigorous, and the multifarious secretions are carried on with greater energy.

Riding, which stood so high in Sydenham's estimation, is an exercise of no mean value for the selfsame reasons, and has perhaps this advantage, that it yields all the good effects of the former, unattended with its fatigue. To those however, in whom consumption has decidedly appeared, the benefit derivable from this mode of exercise may, perhaps, be enhanced by the tendency to an upward motion imparted to the lungs, thus disposing to apposition the diseased surfaces in the upper region of the chest. There is yet another mode of exercise, which was pro-

posed by Dr. Carmichael Smyth, and to which he devoted a separate treatise, namely that of swinging; which, although he does not explain its mode of operation, undoubtedly acts in a manner similar to the foregoing, and notwithstanding I have never recommended it, it may not be unworthy of trial as a prophylactic. A strong proof of the advantages of exercise, may not unwarrantably be sought for in the probable exemption of man, in a savage state, from the ravages of this disease. Although various disorders are mentioned by travellers as having fallen under their observation, I do not remember in the course of my reading to have met with any notice of consumption, recorded by those who have mingled with the savage tribes of either the old, or the new world; at least amongst the more active races of uncivilized man. Indeed it would be wonderful were the case otherwise. Dependent for their subsistence on incessant vigilance, and vigorous exertion; constantly engaged in the toils of the chase, or animated to activity by the animosities ever

subsisting between neighbouring tribes ; however they may lapse occasionally into habits of sloth and indolence, their life from the cradle to the grave must, generally speaking, be calculated to call forth and perfect every bodily energy. Free from the restraints which are the unavoidable consequence of a state of superior intelligence, neither confined to the manufactory, nor chained down to the desk of the counting house, untrammelled by dress, and uncramped by the various devices to which either fashion, or the force of habit, renders us subservient despite the dictates of reason, the savage possesses at least the uncontrolled use of his limbs, and the symmetry, usually observed in him, is perhaps the best index of the health he enjoys. If too, we extend our course of reasoning to the inferior race of animals, and observe the differences existing between them in their wild and domestic condition, we shall find a singular analogy betwixt them, and man. To go no further than the harmless creature, the rabbit, I have found in the course of my researches in comparative ana-

tomy, that this animal frequently dies of consumption, in its tame state; but I never met with an instance of the kind in the wild rabbit. Perhaps the benefit of exercise cannot be better exemplified than by way of contrast—swine proverbially the most indolent of animals, are also the most subject to tuberculous disease; hence the derivation of the word *scrofula*, from the Latin *scrofa*, a swine; and consumption and *scrofula* are identically the same, both resulting from the presence of tubercles. To pursue the analogy, another strong instance of the force, and good effects of exercise, is observable in the race-horse, the hunter, and indeed in all of this class that are subject to frequent and active exertion. These seldom or ever I believe, are found to have tubercles in the lungs, so long as they are kept constantly employed. Many illustrations of this nature might be adduced, but sufficient has been said to enable the reader to extend this comparative enquiry, and to confirm the high value which I set on the effects of judicious, and well regulated exercise. In addi-

tional confirmation of my reliance on mechanical modes of exercise, as prophylactics, I proceed to relate a few out of numerous cases of the kind I find recorded in my note book.

CASE. I.—Some few years back I was called in to see the eldest son of a family of rank, a boy of twelve years of age, who, when I first saw him, was in the last stage of consumption, to which a younger member of the same family, whose case I had not the opportunity of witnessing, had previously fallen a victim. As was expected the case terminated fatally; and on examining the body, independently of the diseased state of the lungs, which usually occurs in consumption, the serous surfaces of the chest, as well as of the the abdomen were studded with innumerable tubercles. Some of these seated in the peritoneum investing the intestinal tube were of large size, and in a state of crudity; and I traced two minute openings in the ileum formed, I have reason to believe, by softened tuberculous matter, through which liquid fœcal contents were diffused within the abdominal cavity. This

part during life was of ascitical magnitude, and on percussion fluctuated, but was almost devoid of pain. On two or three occasions he vomited considerable quantities of liquid matter emitting a fœcal odour, and similar in appearance to what I afterwards found deposited in the peritoneal sac; and subsequent to each vomiting, a perceptible reduction in the magnitude of the abdomen took place. This circumstance would induce me to believe, judging from the peculiar smell, and appearance of the ejected fluid, that a portion had been returned from the abdominal cavity into the intestinal canal, whence, by inverted action it reached the stomach to be discharged by vomiting. The same appearances in regard to extensive tuberculous deposit were, I was given to understand, presented in the body of the younger brother whose death, I have already mentioned, preceded that of his elder—with the exception of the intestinal perforation. From the delicate health of the remaining members of the family, two especially, joined to the foregoing signs of highly-charged serofulous

habit, it was apprehended by their nearest relatives, that the disease would successively pervade the whole family. One, however, I felt assured, from her having had for two years a pulmonary catarrh, would be exempt from the dreaded visitation. Following up the plan which I had ever found so eminently serviceable, I immediately recommended them to commence a course of inhalation. For this purpose I ordered that tubes of various diameters according to the respective ages of the patients should be prepared; through which they were directed to respire twice a day; and the time for this process was gradually extended, until it occupied half an hour, morning and evening. By pursuing this plan of treatment their chests gradually enlarged, their health became surprisingly amended; and a regularity of bowels without the aid of medicine was soon established. It may here be advisable to explain in what manner the simple process of inhalation, whilst it expands the pulmonary apparatus, at the same time regulates the most important of the

visceral functions. The mere expansion of the lungs in the first instance tends indirectly to remove congestion of the liver, and also of the stomach, spleen, pancreas, and intestinal canal, all dependent on the more free circulation of the blood in the former. The biliary, as well as the great salivary secretion, is hereby promoted to a healthy activity. Such morbid irritability of the mucous membrane of the stomach as may be present, productive of indigestion, is removed; the chyloferous absorption belonging to the small intestines, so indispensable to life is actively carried on; and the injurious retention of excrementitious matter in the larger intestines, is obviated by increased mucous moisture, and accelerated peristaltic motion. It were easy, did I deem it essential, to point out at length the beneficial effects produced on other secretions, and to explain the mode by which inhalation acts upon that of the kidneys; but sufficient has been stated to enable the medical man to draw his own deductions in these particulars. To bring the history of this family case to a close, I have

the pleasure of saying that a perfect restoration has attended my endeavours, and that at this moment, these, my former patients, are enjoying all the blessings of health.

CASE II.—A young gentleman was brought to my house, by the Secretary of an incorporated Literary Institution in Lincoln's Inn Fields, labouring, his friends feared, under incipient consumption. His conformation evidently predisposed him to phthisis, and his chest in particular was singularly narrow and slightly deformed. I laid down the plan which I conceived it would be most advisable for him to follow, and pointed out the necessity of strict adherence to my directions. Inhalation, of course, formed a prominent feature in the treatment to be observed. It so happened that I had only this solitary opportunity of prescribing for him; although I could have wished to have seen him from time to time, since there are circumstances which occasionally render it expedient to suspend inhalation for a short period, and to have recourse to local and other treatment.

Notwithstanding the want of this opportunity might be considered unfavourable, it so occurred to my great satisfaction that meeting with the gentleman, who had introduced the youth, about eighteen months subsequent to his consulting me, and of course inquiring into the state of his health, I found that he, having punctually adhered to my instructions, had not only overcome all his consumptive symptoms, and been restored to robust health, but that his chest formerly so flat and confined, had altered its shape, was considerably enlarged, and was to use the expression of his friend, perfect symmetry.

CASE III.—Two young ladies, of adult age, were brought to town by their mother in the middle of the year 1832, for the purpose of taking my advice. Four of her children had, she stated, in a short period of time, been attacked by consumption, and had fallen a prey to it. Each of them, when I first visited them, had a short, hacking cough, with undefined pain in the chest. In the eldest, who was in her nineteenth year, the murmur of respiration was

imperfect in the top of the right lung ; percussion also, on the centre of the clavicle of the same side, yielded a flat sound. My own impression from these signs was, that a tuberculous deposit had already taken place. Bronchophonism was distinctly heard by the naked ear ; and it was plain from the absence of any variety of pectoriloquy, that no softening of the mass, so as to form a cavity, had occurred. With respect to the other sister—since the sound of her respiration was natural, and no bronchial affection whatever was indicated, yet as she had occasional cough, and had had, as I was informed, slight hæmoptysis, I conceived that a few solitary tubercles might possibly exist in her lungs, irritating the pulmonary tissue like the thorn of Van Helmont. These symptoms considered, I commenced with local blood-letting, and the exhibition of nitre in doses of a scruple &c., after which, my chief reliance was on inhalation. They persevered in a course of this for some months, inhaling according to my customary directions, twice a day, varying the diameter of

the tubes employed, since occasionally pain arose from the expansive process being too powerful. Indeed the liability to pulmonary engorgement, from using tubes of too small a diameter, points out the necessity for the constant superintendence of the practitioner, skilled in the auscultative exploration of the chest. One circumstance, perhaps, should not be passed over, as exhibiting an additional proof of the good effects of inhalation on the general health. The periodical uterine secretion of the elder of these young ladies having been suppressed for some months, she recovered in the course of a few weeks the usual feminine habit, which subsequently continued undisturbed. Nothing of further moment occurred in the course of these cases. Continuing gradually to improve, the younger became perfectly restored to health; and the elder, although the respiration in the upper lobe of the right lung is not so perfect as I could desire, still, from the general expansion which the pulmonary tissue underwent in all other parts, and the probability that in time black pulmonary secretion will form round the

existing nodules, so as to isolate them in the manner I have fully described in the chapter on Morbid Appearances, I consider as entirely free from all danger of any formation of tuberculous matter.

The value of exercise, in checking and removing symptoms of incipient phthisis, is in my opinion so great, that I am induced to dwell at some length upon this part of my subject. Those musicians, whose profession it is to play upon wind instruments, are in general supposed to be peculiarly subject to pulmonary complaints; and perhaps not inaccurately so. Yet, I am not aware, that any detailed, or circumstantial explanation has been given of the mode, through which injurious effects arise from the use of such instruments. Whoever will take the trouble to watch attentively a player on the flute, or clarionet &c., will find that although the performer seemingly inspires and expires frequently and fully, yet that in point of fact he often makes several consecutive expirations to one inspiration. Thus his breathing, so far from

being advantageous, and so far from developing the lungs, as I have previously declared well-regulated mechanical exercise will ever do, is indeed so irregular, and furtive, that it produces effects entirely the reverse, narrowing the chest, and confining the volume of the lungs. Indeed it favours that diminished size of the respiratory apparatus, which engenders a tendency to consumption. What I may not inaptly term a wholesale case, occurred some years ago, illustrative of the foregoing remarks. The leader of an itinerant band of musicians, applied to me in behalf of himself, and followers, to know what method they should pursue to avert the threatening appearances, which they considered would ultimately lead to confirmed pulmonary affection. I advised that after their musical entertainment for the time being was concluded, they should always take a long and quick run, or else carry walking-sticks perforated longitudinally through which they might respire, and thus compensate their previous irregularity in breathing. Ludicrous as the idea may appear, of a

set of men scampering off after an exhibition of their scientific powers, these poor fellows had the good sense to perceive the advantage of pursuing my advice ; and I have subsequently learnt that they have experienced its happy influence. It has been my uniform practice indeed, in similar instances, to recommend a similar proceeding, and the benefit has, I trust, been widely diffused. Before proceeding further in this chapter, it may not be irrelevant to notice that protracted indisposition, whether arising from mental or bodily causes, is productive of diminution of the chest, the general debility causing local muscular weakness, and this being more particularly the case in the muscles of inspiration. The lungs thus compressed, are of course favourable to the muscular development of tubercles, and to pleurisies, which according to a great authority, M. Laennec, are the cause of permanent contraction of the chest in consumption. But it should be borne in mind, that this writer is utterly mistaken, when he asserts that the endeavours of nature to cure phthisis, originate the same phenomenon.

The truth is—the contrary is the fact, since on examination of the lungs of persons who have recovered from consumption, we almost invariably find their lungs voluminous, and their chest of increased capacity. When individuals labour under chronic, or incurable diseases of any kind, whether medical or surgical, and the constitution is much impaired by the continuance of ill health, consumption, is in such cases peculiarly prone to manifest itself. But should they have been subject for any length of time to catarrhal, asthmatic, or cardiacal affections, I have long observed that they enjoy a complete immunity from tuberculous attacks, and hence cannot become consumptive. Therefore, in imitation of my own practice, I would earnestly recommend the physician, as well as surgeon, to exercise the chest by means of inhalation, and the result would be to ward off any secondary complaint such as consumption, which so commonly supervenes to shorten lives, that otherwise might have been indefinitely prolonged. To strengthen my assertions respecting the beneficial

results arising from the manifestation of catarrh, in patients suffering from incurable complaints, I could give from my case book, and indeed from memory as well, innumerable cases confirmatory of my views. But a few will suffice to shew that I do not exaggerate its happy influence.

CASE IV.—Sarah Jackson, aged forty-eight, of feeble habit; which had been long induced by cancerous affection of the womb, destructive of the cervix, and a portion of its body, and having produced malignant ulceration of the upper part of the vagina, accompanied with racking pain, fetid sanies, and other exhausting discharges attendant on schirrous uterine disease, applied four years ago, to the Infirmary for Asthma, Consumption, &c.; in consequence of consumptive symptoms, such as hectic fever, frequent pulse, violent cough, with copious puriform, and sometimes sanguineous expectoration, profuse nocturnal perspirations, and—as might be expected—great emaciation and debility. It was not till she had been an attendant at the infirmary for some time, that I was made acquainted with

the above alarming cancerous state. This of course appeared a fearful complication of disease, and in fact made me regard the case as almost hopeless. However by means of small local bleedings at times from the chest, and occasionally from the neighbourhood of the uterus, together with the exhibition of saline medicines, conjoined with tartar emetic in small quantity, and aluminous and other injections for the womb, I succeeded in entirely removing her constitutional disorder, and in greatly mitigating the disease of the chest, as well as that of the uterus. Now whether it was owing to her own imprudence in improperly using the injections too cold, or from incautious exposure to the weather during the prevalence of easterly winds, a severe bronchial affection took place, in which was well-marked sonorous, and sibilant rattle. Excepting mucilaginous and demulcent drinks, with small doses of nitre, she had very little medicine administered to her. Indeed I hailed this adscitious complaint, notwithstanding her much embarrassed breathing, and distressing cough, as

the most fortunate circumstance that could have befallen her; and was therefore inclined to let nature work, carefully watching every indication, and desirous to assist, rather than to interfere with her operations. It is superfluous to enter into all the minutiae of this patient's treatment; suffice it to say, that a permanent catarrh was established, thus at once arresting the progress of consumption, and daily adding to her security from all danger of relapse. Nor was this the sole advantage resulting from the supervention of a bronchial complaint. By the improvement which the patient's general health experienced, from the successful termination given to the consumptive symptoms, the uterine malady has increased but little, which aggravated by the supervening phthisis, would without the ingression of the last of this ternary complication, most probably have long since proved fatal. Thus in this instance, as well as in many others of no dissimilar nature, which it were easy to adduce, we have a corroborative proof that the supervening catarrh occurring spontaneously, will not only

give a favourable turn to the course of consumption, but be instrumental in delaying the advance of an incurable disease. So well defined is this case, and so strong a proof does it afford of the efficacy of the practical treatment, which it is my chief object to point out, that I deem it necessary to demonstrate beyond doubt the consumptive condition of this patient ; and I therefore am anxious to add, that my opinion was not grounded merely upon the common symptoms of phthisis, but upon the more certain indices afforded by physical phenomena. This female, whose employment is that of a nurse, has, I understand, communicated her improved health to Mr. White, Surgeon to the Westminster Hospital ; and also to Dr. Borett, a Polish Physician, and others, who in conjunction with myself, carefully ascertained the nature of her pectoral as well as uterine disorders, and can bear testimony to the order in which they occurred.

CASE V.—Mr. C. W. from the neighbourhood of Rumford, applied to me in February,

1828, for a complaint of the chest. He had been for some months expectorating muco-purulent matter in considerable quantities; through this, as well as by profuse perspirations, and an occasional febrile state, he had become excessively debilitated, and attenuated. After pursuing my advice for a short time he lost his more formidable symptoms, and there were merely left slight cough, and an oppressive wheezing, which at times would compel him to leave his bed about two hours after midnight. Though after this he considered himself well for nearly five years, I have nevertheless grounds for belief, as this was a cured consumptive case, and as his lungs are now slightly emphysematous with but little cough, that his lungs must have been throughout this space of time more, or less affected, with some bronchial irritation. Being called in to this gentleman about eight months ago, as apprehensions were entertained, from certain pulmonary indications, of his relapsing into the state from which I had formerly relieved him, I ascertained by the ear that a bronchial

affection had been established, which from my recollection of the peculiarities of his case, and my having regarded it as one of cured consumption, I felt satisfied would prove the fact. This I at the time pointed out to a most intelligent practitioner Mr. Sewell, and assured him that he need entertain no fears of a recurrence of consumption, though such might not unreasonably be apprehended from a malignant, schirrous affection, which made its appearance eighteen months ago, and had committed extensive ravages on the rectum, perineum, and adjoining parts, for which the most celebrated surgical advice was taken. From the ill-health induced by the foregoing destructive malady, the chances of his having consumption were considerably augmented; but owing to the protection afforded by chronic catarrh, as I have often reiterated, the patient is placed beyond the reach of that most common, and fatal, of human diseases—pulmonary consumption.

CASE VI.—However anti-Malthusian the doctrine may be, yet as it is in accordance with the

law, and may likewise be regarded as a special dispensation of nature, I do not scruple to advance it as my opinion that many cases of threatened, or indeed actual consumption, in the female, may be warded off by a timely compliance with the first benignant ordination given to our first parents—marriage. In order fully to explain how the benefit arises, and in what manner the blessings of matrimony, for such, I believe, despite the talented professor above alluded to, they are still called, operate, I shall cite one from a variety of similar cases. Mrs. E. S. aged thirty-eight, made application to me in the winter of 1827, for a painful state of the chest, with oppressed breathing, and severe cough, through which she expectorated blood, mixed with frothy yellow matter. She likewise complained of profuse perspirations, followed by emaciation and extreme debility. Among other physical signs, pectoriloquism was distinctly heard underneath the second and third ribs of the right side, by the naked ear. When she first came to me, she laboured under much de-

pression and anxiety with respect to her state, not only from her having lost two sisters by the same disease, but from her husband's having inadvertently communicated to her the opinion, expressed by a respectable medical practitioner of Great Ormond Street, who, to use her own words—had unreservedly stated to him, “that no power on earth could save her life.” My opinion, at first, was also of an unfavourable kind. The experience of a few days however, since the most distressing symptoms of the case yielded to remedial treatment, induced me to entertain hopes. These hopes became certainty when I discovered that she was in a state of pregnancy, for I had long noticed that the constantly increasing magnitude of the womb, exerts a powerful influence in suspending, and still further in curing, tubercular plithisis. This circumstance is not brought forward as any novelty to the profession, but simply as affording an opportunity of explaining the process, by which the gravid uterus accomplishes so favourable an end. Contrary to the hitherto received opinion, that a diversion

of morbid action from the lungs takes place through the necessary afflux of sanguineous fluid to the womb, and its embryo, thus arresting disease, I conceive that this mode of accounting for the cures effected, is utterly vague, and unsatisfactory. In such cases the suspension of disease existing in the lungs, and indeed the permanent removal of the constitutional symptoms of phthisis, are no doubt effected as follows. The encroachment made on the chest from below upwards by the pressure beneath the diaphragm, has the effect, in many instances, of bringing in apposition the inferior and superior surfaces of the pulmonary cavities, by which they may after a time unite; and this view of mine is borne out by the *post-mortem* appearances, which I have witnessed in those who had recovered from consumption while in a pregnant state. In not a few examinations of this kind, I have noticed that the internal cicatrizations of the healed lungs were transverse or horizontal, thus proving that the progressive pressure upwards, in the direction of

the diseased summit, had been the sole cause of that union, to which the disease has in great measure owed its cure. This mode of explaining the cure appears to me much less hypothetical than the generally received doctrine, since it is based on proofs derived equally from anatomical, and pathological research ; yet I do not wholly dissent from the customary view of the subject, the cure being indisputably in many instances consequent on the determination of blood to the uterus, thus diminishing to a certain extent a local disease, and allowing by this diminution, the supervention of subacute bronchial irritation, in no slight degree, perhaps, favoured by the horizontal enlargement of the lungs, especially of the lower lobes. Though instances of recovery attendant on pregnancy supervening on consumption, are numerous, yet as cases notwithstanding happen in which a cure has not been effected, I think it essential to indicate one or two reasons for such occurrence.

First, when pregnancy takes place in an advanced stage of the disease, we cannot be surpri-

sed at not meeting with the usual effects ; and a second reason that may be assigned for death following, what might otherwise be regarded as a case of cured consumption, may be found in the absence of chronic catarrh ; or in ill health, after cicatrization has taken place, causing a fresh growth of tubercles. Having thus purposely digressed in order to explain my views of the sanatory influence of pregnancy, I hasten to the conclusion of the present case. Since she first became my patient she has had four children, now alive, and with the exception of a discharge of blood and muco-purulent matter, that continued for a week about three years ago, possibly expectorated from some imperfectly healed cavity of long date, she has had no recurrence of her former formidable complaint. During the last year she was free from any cough ; and with the exception of a slight catarrh, which is now attended with an abundant pituitous discharge, she is in the enjoyment of better health than she has been in for eight years previous. At present I consider her as perfectly secured against

a relapse into her former state, for two reasons—the partial cicatrization which evidently took place during pregnancy, and the existence of emphysematous and voluminous lungs—the first discoverable by respiration denoting that state, and the second being the sure consequence of the former. It cannot, I think, be wondered at, that having repeatedly witnessed the fortunate results arising from the pregnant state, I should have some years ago occasionally ventured to suggest to the unmarried consumptive female, the propriety or necessity of matrimony, where from the circumstance of existing reciprocal attachment, such an engagement could be happily entered into.

I have previously mentioned that asthmatic, catarrhal, and cardiacal individuals are exempt from all danger of pulmonary consumption; and to these I should subjoin persons affected with diseases of the convulsive kind, such as hysteria, epilepsy, or in truth all in which a prolonged, forcible retention of the breath is frequently seen. This circumstance, in patients of

this description, must be accounted for in the manner already explained, when dwelling upon the benefits arising from the mechanical extensibility of the air cells by inhalation.

Before bringing these remarks on the prophylactic treatment of phthisis to a close, there remain a few general observations, the tendency and spirit of which spring as much, or nearly so, from experience in my own person, as from my attention to the cases of others. I have advised in the foregoing portion of my work a generous mode of living, as among the preventatives of this disease; and in peculiar circumstances I would even recommend the use, of course the cautious use, of wine, sound home-brewed malt liquors, and occasionally of other stimulants. I now allude to a failure of health, the forerunner of consumptive attack, induced by trouble of mind, to which I lament to say numbers fall lingering victims. It has been my misfortune, to witness in the course of my practice, but too many afflicting instances of the maladies engendered "by a mind diseased". Well

has the poet of nature remarked this, amongst his aggregate of human ills, when he mentions "the law's delay," than which I know not a greater destroyer of peace of mind, and with it of the body's health. We are accustomed to look back with horror on the proceedings, recorded by historians, as having taken place in that iniquitous court, which went under the name of the Star Chamber. How then, judging by analogy, will our posterity execrate the records left them of the practice of the Court of Chancery. They will there read a pitious tale of justice withheld, of hope, the brightest boon of heaven, extended and protracted, until to look forward is to exclaim with Lear, "oh! that way madness lies." The ghastly train of diseases, consumption, cancer, and other fell destroyers of the human race, which I have seen brought on the wretched victims of the procrastination, until recently, the characteristic of this court, leads me in common with the general voice to reflect with gratitude on the change that has been effected by the wise energy of one master-spirit. Had the reforms,

introduced by him, been adopted even a few years sooner, how many a fair fabric of human happiness would have been spared, that now lies dismantled, and overthrown! To return from this digression. On occasions when the mind is kept constantly on the rack, I consider it not unadvisable to allow a comparative freedom in point of living; but I must add a caution with respect to patients of the weaker sex to whom this freedom, limited as I have stated it should be, must be still more sparingly granted. The difference in strength, both mental and physical, calls for strict attention to this distinction.

THE TREATMENT
OF
CONSUMPTION.

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CHAP. VI.  
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THERE are but two modes by which we can hope to cure this disease:—the one is by rendering it chronic, and the other by artificially

enlarging those portions of the lungs, which are pervious to air. In the first we endeavour to effect an absence of constitutional disorder; but after this change is effected, there may still remain for an indefinite period, one, or more cavities uncicatrized, with lining membrane, partly semi-cartilaginous, or of such condensed and insensible structure as to be productive of little inconvenience, if we except occasional cough, and some hæmorrhage occurring at long intervals, and rarely to a great extent. In the second there is produced what is invariably seen when nature or art has effected a cure—an enlargement of the vesicular structure of the lungs, and subsequently a gradual healing of the tuberculous excavations.

It has always been my great aim to put an end, as early as possible, to the symptoms of Hectic Fever. This I have successfully accomplished in many instances, by employing moderate anti-phlogistic means, among which I may first mention general and local blood-letting. It is astonishing how great is the relief

afforded by even six or eight leeches, applied to the chest, whilst the patient is labouring under the hectic paroxysm. It was early my practice to bleed two or three times from the arm, as we thus interrupt the noonday chills, evening fever, and the nightly perspirations. And when the abstraction of blood by the lancet is employed early, (acute inflammation being absent) and in a quantity rarely exceeding five or six ounces at a time, weakness is seldom complained of; on the contrary, the greatest relief is experienced. The weight and erratic pains of the chest, distressing cough, shortness of breath, and irritability of the stomach, are greatly lessened. It has long appeared to me, that the necessity for the abstraction of blood has not been judiciously considered; otherwise I should not be consulted by so many consumptive individuals, in whom the disease has gone on unpalliated by any sanguineous depletion. Let us only consider how much the chilly fits, which are of daily occurrence, and how much tubercular deposits and engorgements in the lungs themselves (the bulk

of which are gradually undergoing a diminution by the contraction of the chest) have a tendency to produce a certain degree of venous congestion.

The blood of the right ventricle of the heart not finding a ready passage through the lungs, afflicted as above mentioned, causes a preternatural quantity of the same fluid in the adjoining auricle, and especially in the two great veins opening into it. The consequences of this state are head ache, owing to interruption of the free return of blood from the head; pulmonary engorgement, through the difficulty the bronchial veins experience in transmitting their blood by either its direct, or circuitous course into the vena azygos; and serious derangement or actual disease of the most important viscera of the abdomen. The superior cava, preternaturally full of blood, will by retarding that fluid in the jugular veins, produce pain in the head, and by a similar interruption to the circulation of the vena azygos, besides interfering with the free return of the blood into the bronchial veins, it will in some degree impair the activity of the kidneys;

the due return of the effete blood of which organs depends on the freedom with which it is conveyed from the vena azygos into the vena cava superior.

The moderate abstraction of blood occasionally, prevents that congestion in the floating viscera of the abdomen, which gives rise to diarrhœa, irritability of stomach, and likewise effusion from the serous membrane investing these parts, which at times occurs. It has indeed an excellent effect in giving freedom to the hepatic circulation, and thus all the parts whose venous circulation passes through the liver by the vena portæ, are long preserved in a state of integrity. Besides the great exemption from diarrhœa which this practice affords, the colliquative perspirations likewise are either greatly lessened, or for no inconsiderable period wholly removed. Where the disease is not of such long duration as to be attended by much emaciation and debility, I would advise general blood letting, to the extent of four or six ounces, to be performed three or four times, during the pre-

sence of Hectic Fever ; allowing of course, the patient being better, a reasonable time to elapse before he be again subjected to this operation. In consumption, particularly in its early stage, I find patients generally say they are strengthened rather than weakened, when four or five ounces of blood are taken at intervals of a few days. After the constitutional fever has been in this manner interrupted, if it seems in a little while to have a disposition to return, we may again ward it off by applying six, or eight leeches, on the summit of the chest just beneath the clavicles. In my opinion they are best applied on the upper part of the chest, since it is there that the tubercular affection first commences. By thus alternating the general and local bleedings, we husband the patient's strength, while at the same time we mitigate the most distressing symptoms of his disorder. Cases are at times met with, in which the lancet may be used with some degree of freedom. For example:—when signs of pleuritic or pneumonic inflammation are present, and when hemoptical

discharges are attended with much oppression, pain, and heat in the chest. I have not seen it noticed that, in the absence of acute inflammation, the blood taken from the arm of consumptive persons is peculiar in its crassamentum ; it is never cupped, and its upper surface has a somewhat greenish, semi-transparent, gelatinous appearance, with yellow filaments here and there interspersed. Mr Herring, the attentive apothecary for many years at the Infirmary for Diseases of the Chest, has long noticed this extraordinary, and characteristic state, of the blood. It is indicative of an actual, and inappreciable change, in the circulatory fluid. When the muscular parts, and integuments, about the chest are greatly attenuated, local bleedings are best accomplished by leeches, rather than cupping—the tediousness of the former may be obviated by picking them off when they are tolerably full. Instead of fomenting the bites as is customary, which practice exposes the patient unnecessarily to cold, I advise some lint or old linen to be immediately applied, and not removed

for at least half an hour; by this means the blood absorbed acts as a fomentation to encourage a sufficient effusion.

By auscultative examination I have ascertained that when sanguineous sputa make their appearance in chronic, or latent phthisis, they generally result from inflammation of the lower lobe of one, or both lungs, causing some unusual degree of congestion, in parts remaining unhealed; therefore my advice is, in all cases, however unequivocal be the common symptoms of inflammation of the substance of the lungs, that a careful exploration of the chest, both by the ear and percussion, take place. The consequence of this will be, (after we have fully satisfied ourselves that the spitting of blood is not the result of primary change in the vessels, coasting tuberculous excavations in the summit of the lungs, but that it is owing almost wholly to some engorgement, or sympathy with the portions of the lung beneath, in a state of actual inflammation,) that an effective abstraction of blood, to the amount of 14 or 16 ounces,

being directed and repeated after a couple of days, if the same condition should exist, will in a short time assist in bringing the patient to his wonted state of health. Any active treatment of this kind employed without discrimination, particularly when much tuberculous disease is disseminated throughout the lungs, and has formed numerous cavities, which have seriously and manifestly impaired the general health, would in most cases be productive of the greatest evil, and possibly soon give rise to œdema of the lungs, or some other watery effusion elsewhere. Few consumptive cases terminate fatally, without being preceded by some dropsical state of the lungs. This generally occurs when the feet and legs begin to swell, and is a period too, when leeches even are rarely admissible.

I shall now close my observations on bleeding, with mentioning that blood drawn from the arm, in any inflammatory affection of the chest, co-existing with phthisis, appears with a cupped and buffy coat, and not with the peculiar

appearance, already noticed by me, as attending the latter disease in its unmasked state. Not unfrequently the close of existence in the consumptive individual, already reduced to the lowest condition of weakness, and emaciation, is preceded by some pneumonic and pleuritic affection, which admits of no permanent relief by bloodletting.

INHALATION.—I am well aware that many objections may be started to this practice from prejudice, or inefficient observation. Strange to say, the principle, on which this mode of treatment operates beneficially, appears to me quite unknown to medical men. It is supposed that the inspiration of medicated vapours has in many instances proved useful by allaying cough, and by producing some healthy and unexplained change in diseased parts of the lungs, as well as on such adventitious surfaces as are formed after the softening, or discharge, of tuberculous matter. The permanent advantages, which inhaling is capable of affording, I am convinced have been very rarely witnessed by the generality of prac-

tioners. First, because the period, during which persons are directed to inhale, is generally too short to produce either a catarrhal, or an enlarged state of the lungs, one of which conditions is absolutely necessary in order to suspend, or cure, consumption: and, secondly, the apparatuses employed for this purpose are not constructed scientifically, so as to facilitate those physical changes, which it is desirable the chest should undergo. Proper inhalers ought to be so arranged, as to offer some slight impediment to free expiration; which can be effected by having the vessels for containing the materials to be inhaled, of a size capable of holding about two quarts of liquid, with covers perforated by two apertures, one of very small size serving as an air vent, and the other furnished with a flexible or straight tube of narrow diameter, and at least five feet long. For the end of the tube destined to be received between the lips, we may have mouth pieces formed of ivory or bone, each of them having an aperture of a different size. The length of the tube will save

the patient's countenance from being heated by too close an approximation to the body of the apparatus, when filled with heated water; besides, it contributes, together with the small air vent, to retard the free egress of air from the lungs, which, I shall presently shew, constitutes in no small degree the great virtue of inhalation.

An extraordinary but most undeserved reputation is bestowed on various substances, mechanically received into the lungs, in a state of vapour. Among these I may mention, Tar, Iodine, Chlorine, Hemlock, Turpentine, and many other articles of a stimulating or sedative nature. I attach little, or no importance, to any of them. If benefit is derived, it is in almost every instance, in consequence of some such effects as the following:—pulmonary expansion, to a degree sufficient to exert an influence in bringing into contact the surfaces of those primary cavities, which are almost invariably formed in the summit of the lungs;—pulmonary catarrh:—or its common conse-

quence a vesicular emphysema, in both of which the lungs acquire an unusual magnitude; in the latter more especially.

Neither perfect recovery nor indeed exemption from the danger of relapse into a consumptive state, is found to occur, except in very rare instances, unless the pulmonary organs become naturally, or artificially voluminous ; which not unfrequently happens by the supervention of some catarrhal state of the larynx, trachea, or bronchial tubes. It is a most fortunate circumstance for some affection of this kind to occur early, as it never fails permanently to arrest this most fatal disorder. When the lower lobes of the lungs are entirely free from tuberculous matter, (which is often indisputably the case for a considerable period, unless there be strong hereditary predisposition ;) and though there exist at the same time cavities in the superior part of one, or both lungs, clearly indicated by perfect pectoriloquism, there is almost a never failing hope of recovery to be entertained, provided an emphysematous sound can be heard

In fact I never knew a consumptive person who did not lose all his formidable symptoms and regain health, when an emphysematous, or a semi-asthmatic change had early taken place. And likewise, I never knew an individual to become consumptive, who was a subject of chronic catarrh, or any species of asthma. It is from long consideration of these facts, that I interfere but little with any catarrhal inflammation, which may show itself in the midst of consumptive symptoms, for I well know that it will gradually supersede all these.

I may here remark that cavities in the upper part of the chest are never healed, unless the pulmonary tissue be expanded in their neighbourhood, or in the other lobes of the lungs. In such case, I have repeatedly listened to some bronchial inflammation which has most luckily taken place near to those cysts, which are left when tuberculous matter has been removed by absorption, or expectoration. I have been truly gratified to hear the well-marked pectoriloquy gradually become less distinct, till together with

the constitutional symptoms of phthisis, it has been at last entirely lost, and nothing has remained but the dry *râle* of enlarged air cells, slight catarrh, and a little absence of respiratory murmur in the place before occupied by tubercles.

Should there be catarrh in the superior bronchial tubes, of a duration sufficiently long only to heal ulcerations and cure the patient, he may months or years afterwards, if there be any cause assisting to impair the general health, be again attacked by consumption; but never can this relapse happen, if the bronchial tubes be subacutely inflamed for a period sufficient to produce chronic dyspnœa, or habitual asthma more, or less, severe. Half of those, which are commonly regarded as cases of asthma, originate in consumptive disease whose progress has been arrested by the supervention of that affection; but in which neither fresh crops of tubercles, nor hectic fever need be apprehended. Any individual indeed having asthma, from whatever cause resulting, is as perfectly exempt from consumption, as he who had been consumptive,

but has afterwards had his disease merged into asthma. In a word, it may be confidently affirmed, that no asthmatic person need ever be afraid of becoming consumptive.

In order to promote expansion of the aërial tissue of the lungs, it is my usual practice in the absence of catarrh, and when congestion in the chest, and the symptoms of hectic fever have been diminished by small general bleedings, repeated at proper intervals, or by the application of leeches over the second and third ribs anteriorly, to advise Inhalation as soon as possible. A drawing of a suitable apparatus will be found at the end of this work. There are few early cases of Consumption, but what will be rapidly improved by this treatment steadily pursued. The disease being thus checked, the same changes will follow which are attendant on catarrh. The nodules of unripe tubercles will become innoxious in consequence of being surrounded by black secretion, or what has been called black pulmonary matter; and small cavities, already formed, will have their surfaces

soon brought in contact, so as to heal by what surgeons term the first intention. It is, we must own, preferable to effect pulmonary expansion by sure artificial means, rather than to depend upon the uncertain production of catarrh. And there is another important point gained, inasmuch as recovery takes place unaccompanied by any cough, or difficulty in breathing, which generally attends those cures which nature herself now and then accomplishes by introducing this less fatal, yet distressing, complaint. Inhaling performed two or three times daily, for half an hour each time, will in the space of a few weeks work a wonderful change on the chest ; externally the muscles concerned in respiration will be manifestly enlarged, and the bony compages of the chest both before, and laterally, visibly increased ; whilst, at the same time, the natural respiratory murmur will be heard internally, far more distinct than ever. Such has been the increase of size which the chest, in young persons especially, has undergone through the exercise of Inhalation, that I have known a

waistcoat, which buttoned easily, require in little more than a month to be widened. It is in fact incredible, to one who has never been at the pains to measure the chest, or examine its shape, what an enlargement it acquires, by the simple action of breathing for the time above stated, backwards and forwards, through a narrow tube of a few feet in length. Though I attach but little virtue to the substances that are inhaled, still as we find patients more willing to receive into their lungs something having sensible properties, rather than pure atmospheric air, I recommend a handful of hops, a little vinegar, or a table spoonful of spirits of turpentine, to be added to the warm water in the Inhaler. Every impediment to the free action of the ribs is to be guarded against, by loosening whatever in the way of dress, is at all likely to confine them; and it would be advisable too for the patient, if strength allows, to inhale at times in a standing position, as the diaphragm will then descend more easily, and deeply, and of course allow the lungs more room to expand.

There are cases in which Inhalation is contra-indicated; for instance during the presence of pleuritic or pneumonic inflammation, hæmoptysis, or latent consumption of long standing.

It is to be discontinued, at least for a time, should it be followed by distressing headache, much internal thoracic soreness, dilatation or hypertrophia of the heart, severe mucous catarrh, or generalemphysema of the lungs. When it agrees well, it can be safely and most beneficially used for six months, or even longer. At this time, besides a removal of every consumptive symptom, a permanent enlargement of the chest will have taken place, proving a perfect safeguard against the recurrence of any future attack.

As tubercles are rarely formed in the muscles of voluntary motion, we have hence reason to believe that the same additional exercise of the pulmonary organs, by more frequent expansions and contractions, will act as a preventative.

Before I was aware how materially the lungs can be enlarged by simply respiring through a

long tube, of small diameter, I, some years ago was induced to try various means for producing pulmonary catarrh, or some corresponding affection, in the great air passage, vulgarly called the windpipe; knowing well what an excellent agent such an affection is for expanding the chest, removing speedily well marked symptoms of consumption, and in a word, destroying altogether the tuberculous tendency. For this purpose, as in the heat of Summer and the early part of Autumn, we rarely meet with cases attended with a catarrhal complaint, one of my expedients was to oblige the patient, to breathe twice or thrice a day atmospheric air made cold by artificial means. In more than one case I succeeded in producing a catarrh, which led to the recovery of the consumptive patient. On several occasions among the in-patients at the Infirmary for Diseases of the Chest, the wards of which are heated in winter so as to imitate a moderate summer temperature, I have dismissed individuals whose consumptive state seemed to be but little relieved; but owing to their going

at once from the warm atmosphere to their own abodes, where perhaps some of them were badly secured against the cold, or indeed owing perhaps to their imprudent, and thoughtless exposure to the open air, they have caught a severe cold of a catarrhal nature, and this in some, having tubercular excavations of recent date, I can assure the reader, has alone effected a perfect cure. I here subjoin a case, in which will be seen the value of a catarrhal affection in removing, or affording perfect security against consumption.

A young man, a cutler by trade, having lost three brothers by consumption, came to my house in the summer of 1827, seeking to be relieved from symptoms, similar to those which he had observed during their illness. He stated that the first indication of his complaint arose, after he had had a severe attack of rheumatism, which was with difficulty removed, and which left him much debilitated. When I first saw him, he computed that his cough, which was soon followed by a discharge of blood from the chest,

had existed four months. He stated too, that he had early placed himself under medical advice; but that in spite of various medicines administered for his cough, the spitting of blood, periodic fever, profuse perspirations at night, and occasional diarrhœa, in short all the unfavourable symptoms seemed daily to increase. The first moment I saw him, his countenance bespoke the nature of his malady; and a few questions put to him soon confirmed my supposition,—that he had all the common symptoms of consumption. Whilst exploring the chest by the naked ear, and by the stethoscope, I ascertained on the summit of the right lung the existence of a cavity, which afforded when he spoke a perfect pectoriloquy, and there was a gurgling when he coughed. On the left side, anteriorly, beneath the clavicle and over the second and third ribs, the respiratory sound was indistinct. In all other parts the chest seemed healthy, save a state of respiration approaching the puerile which was heard in the lower lobes. In order to subdue the constitutional fever at-

tended by a painful cough, I directed some blood to be taken from the arm ; and this after some few hours, not having afforded the expected relief, several leeches were applied to the anterior and upper part of the chest, and at intervals of four or six hours during the day, scruple doses of nitre, with a quarter of a grain of tartar emetic, and a drachm and a half of syrup of poppies, were taken in an ounce of some demulcent vehicle ; this compound acted freely on the kidneys, and together with pills taken at bed time, containing extract of lettuce, ipecacuanha, and precipitated sulphuret of antimony, gave, in the course of four or five days, great relief to his pectoral disorder. Though I succeeded two, or three times, by means of leeches again and again applied, and medicine varied to meet new symptoms as they appeared, in regaining for him what, comparatively speaking, he considered a return of tolerable health ; still, with a view to effect a perfect cure, it occurred to me, as my patient was a man of no small ingenuity, that I might possibly get him to make a steel instrument

shaped like a collar, deep behind, and so contrived, whilst it produced no inconvenience on the neck laterally, as to make a gentle pressure on a small part of the trachea, immediately above the sternum and between the sterno-cleido mastoid muscles. This new agent was soon ready for use, and was worn at intervals for the space of two months. In front a small piece of dry sponge was placed between the converging points of this imperfect collar, and the wind-pipe ; most happily for the patient, the pressure on the wind-pipe caused a slight mucous inflammation within it, and this was succeeded throughout the lungs by bronchial irritation, with a slight wheezing denoting an enlargement of the air vesicles. None of these symptoms were interfered with, and they continued for some months, after every apprehension of consumption was removed. It was really wonderful how much he increased in flesh, and to what bodily vigour he arrived, especially when the catarrhal complaint had established itself, in the neighbourhood of the tuberculous disease in the superior

lobes. At the expiration of a fortnight from this time, a loud mucons rattle began to appear near to the seat of the pectoriloquy in the top of the right lung; all trace of a cavity was nearly lost, and the respiration there daily became more audible. The same improvement took place in the respiration of the upper portion of the other lung, which, I have already mentioned, seemed to be diseased. With the exception of periodic shortness of breathing sometimes preceding, and at other times following, fits of coughing, the patient might be said, were he judged only from his look, and his feelings, to be perfectly well. After tracheal rattle had for a month been distinctly heard in the larynx, and appeared to be extending itself along the trachea to the larger bronchial tubes, he was directed to discontinue altogether the further use of that simple apparatus the steel collar. On one occasion only was it necessary to moderate, by the application of leeches, the mucous excitement of the lungs, when it ran so high as to cause suffocative breathing, incessant

cough, superabundant expectoration, and general febrile disorder. With the exception of five grains of compound ipecacuanha powder, and double that quantity of extract of hops, made into pills to be taken at bed time, and the occasional use of a mild aperient, there was little else done for the supervening catarrh; for I felt exceedingly reluctant to interfere much, well knowing the value of the new disorder, and that it would long prove a successful antagonist to any future, as well as present liability, of sinking under consumption. In the month of August 1830, which was three years from the time he became my patient, I had an opportunity of seeing him in the enjoyment of excellent health; if I except a little asthmatic respiration, which I detected by the naked ear whenever he made a forcible expiration. In the upper part of the chest, both before and behind, the expirations were of an emphysematous character; the air in fact was heard escaping from the enlarged air cells with prolonged murmur, in which dry cracklings perhaps arising

from some air cells being united into one, were audible. Having ascertained what I have just described, and how much the shape of the chest had been altered, which from being narrow in its antero-posterior diameter, and flat, was become cylindrical and enlarged, I assured him that he never would relapse into his former consumptive state, and that with a little care on his part in attending to some directions which I gave him, his present asthmatic symptoms would have little effect in abbreviating the duration of his life.

This case is highly instructive. It is one by which mechanical aid produced in the midst of summer, such a degree of general catarrhal affection of the air passages of the lungs, that complete recovery took place. Nor was this all—for through the emphysematous state of the lungs, a perfect security existed against any liability hereafter to tuberculous productions. In a word he escaped every chance of pulmonary consumption.

It may not be uninteresting to mention the particular circumstance, which led me to imagine

and adopt the above invention. A gentleman of the name of Willis, who a few years ago resided in the neighbourhood of Kennington, and was under my care, happened to have a small oblong tumour in front of the neck, with its inferior portion lying between the sternum and the trachea, from which resulted a slight obstruction to his respiration.

This tumour, which had existed for some years, had induced a perfectly asthmatic state. By preventing free expiration, and likewise by exciting a slight continuous inflammation of the mucous membrane, from the point of pressure into the numerous ramifications of the bronchi, the air had become imprisoned within the air cells, and in this manner was produced a general emphysematous state of the lungs. Besides the difficulty of breathing, usually attendant on this condition of the pulmonary organs, the obstruction from the tumour naturally caused him to breathe with a loud, wheezing, and somewhat croupy sound. Observing this, I concluded that if a slight mechanical resistance

to the free egress of air from the lungs could be produced, so as to impart the prophylactic benefits of the asthmatic state, without the distressing and aggravated accompaniments noticed in the case just described, it would be a remedial agent of no small efficacy. "On this hint I spake," and seconded by the ingenious contrivance of the artizan, whose case I have been particularizing, I was fortunate enough to bring the contrivance to bear, and to find that I had not miscalculated its advantages. I have entered into this detail, as it serves by analogy to throw additional light on the position I have advanced respecting the non-liability of the asthmatic, or catarrhal, patient to phthisis; although from the superior benefits to be obtained by a duly extended course of inhalation, and having satisfied my curiosity by the experiment, I have never since employed the preceding mechanical contrivance.

Having noticed the effects, arising from a small tumour on the neck of my patient Mr. Willis, I may observe that that enlargement of

the thyroid gland, technically called bronchocele, but more familiarly known by the name of Derbyshire neck, induces, when considerable, by the pressure it occasions on the trachea, symptoms of a similar nature, and like results. Nor are the consequences of aggravated hysteria to be overlooked in this place ; since a frequent communication of spasm to the posterior membrane of the trachea, will, by imparting to the person so affected a slight asthmatic tendency, and thus enlarging the volume of the lungs, preserve the female from all liability to pulmonary consumption.

My remaining observations on the treatment of consumption will be brief for two reasons ; first, since I have fully detailed the two most important branches of the curative process ; and secondly, because the sole uses of medicine are to palliate, or by inducing a chronic state to favour the supervention of catarrh. Again, by removing the constitutional symptoms, the local affection may terminate in an insensible excavation, hardly interfering with the general health.

Amongst the innumerable medicaments that have been, and are still tried, I shall specify a few, the advantages of which, are capable of proof, not depending on the caprice of fashion, there being a fashion even in medicine, or upon any imaginary virtues. Our Dispensatories are full of such drugs, and so unfortunately is practice; yet the number of those, applicable under any form, to phthisis, is of very limited extent.

CATHARTICS.—In the commencement of consumptive symptoms, as the general health is usually deranged, recourse must be had to purgatives very sparingly. From an erroneous view of the causes of consumption, great mischief has arisen in the employment of aperient medicines; and this injudicious treatment has been propagated by the sanction of names of no mean authority. Instead of increasing debility by the exhibition of cathartics, it is infinitely preferable to remove congestion by the moderate abstraction of blood, as previously noticed. Great caution should be observed, as to the kind of medicine, employed for purga-

tive purposes. Saline aperients ought in general to be avoided, from the debility they induce by carrying off the serum of the blood, and by too rapidly accelerating the passage of the chyliferous matter, before due absorption takes place. It should be borne in mind, that a relaxed state of the bowels is a very frequent accompaniment of consumption; and that any undue administration of laxative medicines will, in most cases, superinduce abdominal gripings and diarrhœa, events which cannot be too sedulously guarded against. In the inflammatory complication of phthisis, a powder, composed of from ten to fifteen grains of jalap, combined with two or three grains of calomel, may be administered as an auxiliary to venous depletion. Indigestion is of no uncommon occurrence in consumptive complaints, yet as it usually arises from morbid sensibility of the stomach and of the intestines, the most rational method of proceeding, is to equalize the circulation by moderate venesection. Occasionally a few leeches, applied to the pit of the stomach, will be equally

successful in removing dyspepsia. As an ordinary laxative, a few grains of dried subcarbonate of soda, calcined magnesia, and rhubarb, taken in some liquid vehicle, will be found highly useful.

EMETICS.—At one period emetics were held in no slight repute, and much useless torture, or I should rather say injurious pain, was the consequence to the consumptive sufferer. It has always been a principal object with me to avoid every thing calculated to distress, or annoy, without imparting benefits equivalent to the uneasiness undergone. That this is not the case with the administration of emetics is proved convincingly by the fact, that when vomiting is brought on in a natural way, by violent coughing, the patient experiences no relief. Whatever faith medical men may be inclined to place in the remedial powers of emetics, I have none; although I candidly confess that I am in the daily habit of prescribing small doses of the tartarized antimony, and of ipecacuanha; yet in so minute a degree that they are within the

limit of actual nausea.

SUDORIFICS.—Twenty, or thirty years ago, it was the general practice, in all diseases, to determine to the surface of the body, and some practitioners, enamoured of the wisdom of their youthful days, still adhere to it. Great injury undoubtedly resulted from this indiscriminate course, and more particularly would this be the case in phthisical complaints. Although employed with the view of diverting morbid action from the lungs to the surface of the skin, yet the consequence of the stimulus thus imparted is not unfrequently increase of hectic fever, terminating in pulmonary engorgement, or visceral excitement.

No relief indeed is afforded by sudorifics. On the contrary when perspirations occur spontaneously, they are found sensibly to reduce the patient's strength. In the hot stage of hectic fever I endeavour to reduce the tenseness, and aridity, of the cuticular surface, by having the hands and upper part of the body sponged with tepid water and vinegar; and I order this

to be continued, until a reduction of temperature takes place. The same treatment is to be pursued on every return of the hectic paroxysm. It being of infinite importance to preserve an equable temperature of the body, I uniformly attempt the removal of whatever state is unduly predominant. Therefore in the cold stages, I direct the immersion of the feet in warm water, and advise the patient to take some warm beverage, as tea, &c., and when perspiration is profuse, I lessen it by administering either an infusion of columba, or of camomile, in preference to the acidulated infusion of roses in such general, but in my opinion, injudicious use. In periodically recurring perspiration, except in the very last stage of the disease, the application of leeches to the chest will be found far superior to any tonic whatever.

EXPECTORANTS.—The use of this class of medicines seems founded on no valid reasons; nor are the benefits produced very visible, or satisfactory. Could they stimulate the mucous membrane of the lungs to a catarrhal state,

they would be beneficial indeed ; colchicum, I have reason to believe, occasionally operates in this manner ; but its effects are uncertain.

In many consumptive cases there exists a superabundance of expectoration ; and consequently in these all expectorants are supererogatory. Above all, that anxiety which is frequently displayed to avert, or palliate cough, is unnecessary, since it often occurs that to this an emphysematous state of the lungs is owing ; which protective, by the injudicious attempt to allay the cough, is thus lost. The chief good resulting from expectorants is not owing to any specific action exerted, in particular, on the pulmonary organs ; but rather, as is the case with ipecacuanha, and tartar emetic, it is due to a variety of influences. Thus the former of these medicines seems to act as an astringent where expectoration is superabundant ; and generally speaking, both these substances, in addition to their value as expectorants, aid all the secretions. Other expectorants as squills, ammoniacum, myrrh, &c., are to be cautiously

employed when phthisis is accompanied by hectic fever ; but ipecacuanha, and preparations of antimony possess the great advantage of being of safe administration in proper doses, during every stage. Mercurial agents exert a powerful influence in promoting expectoration, as they likewise do on every other secretion, and this property has led to most injurious consequences. Some years ago I had opportunities of seeing, in the practice of a deceased physician at the London Hospital, a woful example of the evils arising from the exhibition of mercury in cases of phthisis. The facility given to expectoration seemed to delight this practitioner ; but it was so rapidly increased, and accompanied by such extreme perspirations, wasting away, and diarrhœa, that the patients soon went into what is vulgarly, but not inappropriately denominated, —galloping consumption.

NARCOTICS AND DEMULGENTS.—The latter, as remedies, are out of the question ; but as palliatives are highly serviceable. Being mostly of a nutritious nature, they tend to keep up the

patient's strength ; while they soothe the irritability of the chest. The former are occasionally useful, but they are liable to great abuse. Given with a view to promote sleep at night, much nicety is required in their regulation. When the hectic state and excitement obstructive of sleep have been removed, recourse may for one night be had to an opiate ; but should it be repeated on the succeeding evening, it too often happens that its effect will be lost. Digitalis and hydrocyanic acid have both been extolled as of infinite efficacy ; but they are undeserving of the high reputation bestowed upon them. Dr. Ferriar imagined that by combining the former with myrrh and sulphate of iron, he increased its utility in consumptive disease ; yet, how its union with two stimulants could be productive of benefit, I do not exactly see. As to hydrocyanic acid, I concur with Laennec in regarding it, although it may sometimes relieve cough and dyspnœa, as of far inferior value to many preparations of opium. In particular idiosyncrasies, in which opium under any form is found to

disagree, the extract of hyoscyamus, and the feebler narcotics, as extract of lettuce or hops, will singly, or combined, lull cough and afford rest. I may here note that the pharmacopœia of this country exhibits an unsatisfactory catalogue of opiates. It is to be hoped that these, with other omissions, will shortly be rectified. The expected admission of the numerous and intelligent physicians, termed licentiates, to the privileges due to their learning and science, will indisputably operate a most beneficial change, and form a new era in medicine. I should regard it unfair, were I not to state that Batley's *Liquor Opii Sedativus* is the preparation I in general prefer.

ASTRINGENTS AND TONICS.—The first of these are employed for a threefold purpose—to check discharge of blood from the lungs, to restrain colliquative perspirations, and also diarrhœa. Sulphuric acid with infusion of roses has acquired much notoriety as an astringent; but I seldom employ it, since I find its use not unfrequently followed by distressing tension of the chest.

Although, I own, it may be advantageous for a time, yet its continuance is apt to exercise an effect the reverse of what is intended. It seems to me in such cases, to increase rather than diminish hæmoptysis. The acetate of lead, in small doses, combined with opium, is far superior not only to the acid, but to every other astringent. All danger of its producing an unpleasant action upon the bowels, apprehended by some, may be obviated by occasionally intermitting it and regulating the evacuations. I have already pointed out the most salutary mode of checking perspiration by the application of leeches to the chest, and it remains for me to notice the best remedial agents for diarrhœa. These are chalk, kino, catechu, pomegranate bark, and Armenian bole. Chalk with a few minims of Batley's preparation of opium, administered in barley water, gruel, &c. will be found to equal in efficacy more compound admixtures. Of Tonics the simplest are the best. Bark, I rarely, or never, prescribe; but under particular circumstances, infusion of co-

lumba, of camomile, or occasionally of cascarrilla, may for a short period, be not disadvantageously employed. While the Brunonian theory was held as the guide of practice, preparations of iron were in high repute, and one of these the antihectic mixture of Dr. Griffith, so termed it would seem like "*lucus a non lucendo*," from its possessing properties the reverse of its name, is still, I am sorry to say, in estimation with some practitioners. The use of such medicines in a complaint, that calls for every effort to abate and moderate excitement, cannot be too highly reprobated.

BALSAMS.—I hold it totally unworthy time or paper to waste many words on this very futile description of medicine, at least as applied in consumptive cases. It was supposed in the days of Dr. Morton, and of Van Swieten as well, that balsams exerted a vulnerary power; but to use such medicines at present, or to suppose that any medicine whatever can heal ulcers of the lungs, betrays an extraordinary ignorance of the peculiar nature of phthisis. There can be

no other possible method of healing them, except by bringing their surfaces in apposition, since unlike other ulcers they never granulate.

BLISTERS.—When expectoration is super-abundant, or an œdematous state of the lungs is supervening, these may be applied with success ; and when abstraction of blood generally, as well as locally, fails in removing fixed pain of the chest, I find them very useful. In general, however, they are too indiscriminately employed ; since their use at an improper period tends to bring on, and accelerate, the hot stages of hectic paroxysms. Thus they superinduce a continued febrile state, not unfrequently terminating in some variety of thoracic inflammation. One fact, peculiar to the application of epispastics in consumptive cases, seems almost unknown to the medical profession. I have never known a patient suffer from gangrene through their use, although such cases are of no uncommon occurrence in other disorders. How little susceptible individuals, labouring under phthisis, are to mortification, has been noticed by that great autho-

rity Laennec ; he explicitly states that even protracted confinement is inapt to produce gangrenous eschars, and the whole course of my experience corroborates his assertion.

DIET.—This should ever be varied according to the digestive powers of the patient. As a general rule, the system of over-feeding, or to use a common phrase, of keeping up the strength of the consumptive individual, cannot be too strongly deprecated. It is indeed strange to find any one so imbecile as to recommend in a disease, in which, even under the most judicious treatment, febrile action will be of almost daily occurrence, a course of diet, suitable only to the healthy and vigorous. Yet, in the absence of gastric irritation, and on the abatement of hectic fever, the food may be of a nutritive and invigorating description. This caution, however, is to be borne in mind, that whatever is followed by increased heat of body should be abstained from. The best index of food's agreeing with a patient, is the absence after meals of constitutional disturbance. Except during the presence

of inflammation, and of hæmoptysis, I am in the habit of allowing the moderate use of meat once a day, with an egg occasionally at breakfast or by way of lunch, according to the patient's fancy ; nutritive broths, taken lukewarm (indeed a sense of chilliness excepted, whatever liquid is drunk, should be of very moderate temperature) and as to a milk diet, so commonly ordered, I reject it altogether. It excites expectoration in an unusual degree, without however leading to any catarrhal state. When consumption is decidedly manifested, wine is for the most part inadmissible. A small glass of ale at dinner may at times be permitted ; and occasionally at night, with the view of inducing sleep.

CLIMATE.—It has been seen from the preceding pages how much I am at variance with the common opinions entertained of phthisis, and to none am I more diametrically opposed than to those which respect climate. So far from sending a consumptive patient to the south of France or Italy, I should, if change be requisite, deem the climate of St. Petersburg a thousand times more

beneficial. In the latter case he has a chance of contracting catarrh, and of thus staying consumption; in the former, any catarrhal state which might exist would assuredly be fatally removed. My experience on this point is full and explicit; and I could substantiate it, were it requisite at the close of a treatise, the scope of which has been to prove the true nature of this little understood malady, by numerous cases. So decided am I on this head, that I never admit into the Infirmary a phthisical patient with recent catarrh, because its wards are heated in winter times so as to resemble a moderate summer temperature. In uniformity with these opinions, I feel no anxiety respecting consumptive patients being kept scrupulously within doors. Whenever the weather permits, they should be allowed to take an airing daily; but should not be suffered to remain so long as to be sensible of chilliness, or cold.

APPENDIX.

CASE I.

Supposed Consumption cured by Paracentesis.

EXUPERIUS V. PARKER, aged 32, of the merchant service, but formerly a petty officer in the royal navy, was admitted into the Infirmary for Diseases of the Chest in November, 1831. He was at this time suffering under frequent and painful cough, attended with expectoration of opaque yellow sputa, singularly foetid, and so abundant in its discharge as to amount, in one day, to three quarts, being occasionally tinged with blood. Along with violent pain in the inferior part of the left side, his respiration was obstructed and difficult; and his sleep was unrefreshing and broken through constant suffering, and accessions of high fever on the approach of night. He likewise laboured under profuse perspirations, was excessively emaciated, and his complexion was of a sickly yellow hue. It appeared, on enquiring of him the causes which had led to this state, that whilst on his passage, in 1829, from Kingston to

Mourant Bay, in Jamaica, he had been frequently drenched to the skin, and that he had suffered his clothes to be dried on him by the heat of the sun. In consequence, as supposed, of this, he was seized with the yellow fever, and, on a relapse occurring after his return to Kingston, he was admitted into the hospital. The fever was so violent as to produce delirium, during which he repeatedly rose from his bed to commit suicide, and as he was then under a course of mercury, he concluded that he must in these paroxysms have caught cold; since, when convalescent, he experienced severe pains in the left breast, accompanied by violent cough. The latter continued unabated; and on his return to England he consulted a medical man at Limehouse, after a violent seizure, in which he experienced a sense of strangulation, followed by a copious discharge of matter. Being regarded by this gentleman as in the last stage of Consumption, he was induced to apply to the Infirmary. Here he derived such relief, notwithstanding the existence of a large abscess, occupying the inferior lobe of the left lung, which I detected on the first examination of the chest, that I recommended him to go to sea again. I was induced to give this advice from having

met with two or three similar cases, in which the abscess had remained stationary for some years. He again made a voyage to the West Indies : on his return from which to this country it was that he presented himself to me, affected with the formidable symptoms I have detailed at the commencement of the case.

Having satisfied myself by auscultation with the naked ear (which I invariably prefer to the stethoscope) of the extent of the disease, and after various topical applications, combined with constitutional treatment, had failed to mitigate the intense pain of his side, or to relieve his suffocative respiration, I determined to introduce a small trochar into an intercostal space immediately over the seat of the abscess. On my first calling on this patient, two years previous to the period of which I am now speaking, had no improvement taken place, I had resolved to perform this operation ; but finding his health so amended on the very day I had fixed for the paracentesis thoracis as to preclude its necessity, I deemed it expedient to trust to time and palliative treatment. The result proved I had not judged incorrectly. But to return to the operation. Having observed a slight tumefaction about two inches beneath the left

nipple, I directed Mr. Herring, in the presence of Mr. Hudson, navy surgeon, to open it; having first carefully ascertained that the pressure of the accumulated matter had occasioned a sensible inclination of the heart towards the right side. From the intensely acute pain felt in this spot by the patient, for which the abstraction of blood afforded no relief, it appeared to me that nature was on the point of endeavouring to work a cure by gangrene of the pleura; and that by fixing on this as the spot of election, a ready escape would be given to the contents of the pulmonary abscess. After the division of the integuments by the lancet, the same instrument was used to open the intercostal space, and no sooner was this effected than a quantity of air issued from the orifice with a hissing noise, followed by a discharge of opaque yellow matter, similar to his expectoration, with the exception of its containing particles of a friable substance. The opening thus made continued to discharge matter, mixed with air, for the space of ten days, with surprising mitigation of his previous suffering. Having about this period imprudently sat for a considerable time in an unaired apartment, he was seized with so violent an inflammation of the bowels, as to demand vi-

gorous and decided anti-phlogistic treatment. This attack produced a sudden and entire suspension of the thoracic secretion ; but on the abatement of the inflammatory symptoms, his convalescence was slowly but permanently effected. It should be mentioned that on examining his chest, I ascertained that the portion of the lung which had previously been the seat of matter and air, and from which a clear, gurgling sound, as well as pectoriloquism emanated, began almost immediately after the operation to be occupied by the dilated pulmonary tissue, a process indicated by respiratory murmur. Before the operation, and indeed for three years previously, the respiration of the whole of the right lung, and of the upper portion of the left, as far as a line drawn horizontally from the outside of the nipple of the left breast to the spine, had been distinct, and somewhat puerile. In the inferior part of the left side of the chest, pectoriloquism was clearly marked ; and nearly the whole of the lower lobe of the left lung was, as far as I could judge, the seat of an immense abscess, from which he could discharge matter at will, even to the amount of a tea-cup full. At times, during the action of coughing, I could perceive the intercos-

tal spaces over the vomica, apparently distended. Mensuration of the chest gave no perceptible difference between the capacity of the two sides; but that enlargement of the ends of the fingers, especially of the thumbs, which I have already noticed as indicative of the existence of large excavations, was in this case particularly observable. On his recovery, this unnatural tumefaction entirely subsided. I have been thus minute in detailing this case, from my conviction of its rarity, and importance. It was, as has been seen, a case of pulmonary abscess, which had existed for three years, resulting from the combined effects of yellow fever and severe cold, terminating in pneumonia, and during the greater part of this time I was called upon to observe, and consequently felt a strong interest in, its progress. As I had early intimated to my pupils my judgment on this case, and was sanguine in my belief of his recovery, I derived great satisfaction from having the precision of my diagnosis verified.

CASE II.

Consumption cured by Paracentesis.

DAVID SCOTT, aged 17, admitted an in patient of the Infirmary Nov. 1827, had been indisposed

eleven years ; his illness originating in his having taken arsenic by mistake. For several years, previous to my seeing him, he had been afflicted with cough, and other symptoms of consumption. On entering the Infirmary he showed none of the usual signs of emaciation in his person, but there were an unhealthy fulness and flushing in his face ; he expectorated abundantly viscid, frothy sputa, of a greenish colour, and semi-opaque. This matter, amounting to about two pints daily, was of an odour so intolerably offensive, as to require the almost instant removal of the vessel which received it, in order to spare the feelings of the patients in the same ward. Conceiving that a well regulated atmosphere, such as that of the Infirmary, which is kept of a uniform temperature by means of German stoves, would, conjoined with sedatives, lessen the copiousness of the discharge, I deemed it advisable to try their influence for a time. After a month's sojourn in the Infirmary, and the failure of remedial agents, finding his feet œdematous, and considerable dyspnœa present, and that there was, in fact, a decided change for the worse, I resolved to recur to an operation. His condition, at this period, was as follows: on the right side, anteriorly, from

the clavicle to the fourth rib, there was a strong gurgling rattle, indicating the passage of air through cavities containing matter. The character of the sound induced the belief, that the fluid was in immediate contact with the walls of the chest. Pectoriloquism was well marked, posteriorly, as well as anteriorly; his respiration cavernous, but there was entire absence of the *souffle voilé* (the veiled puff). Hence I became certain, that the surface of the lung adhered firmly to the costal pleura. Percussion on the same side, as well as the naked ear, showed that some portion of the inferior lobe of the lung, a little below the excavations, still admitted the passage of air. On the left side, the chest sounded well, and the respiration was distinctly audible over the whole of it, except below the clavicle, where it was absent, and where I at once detected imperfect pectoriloquism. The operation was performed with a small trochar in the presence of Mr. Herring, the apothecary, and of more than twenty of my pupils, by a surgeon, a fellow lecturer of mine. The place of election was in the intercostal space, a little anterior to the digitations of the greater serratus muscle. It was my desire that the puncture should have been made between the third

and fourth ribs ; however, it so happened that the instrument was introduced between the fourth and fifth, upon which there immediately issued a quantity of air, with a hissing noise, without any discharge of matter. The point of the trochar indeed exhibited traces of pus, and although it had been fairly introduced, yet the place of election was too low to suffer the escape of the matter. Observing that the patient was lapsing into syncope during the rushing out of the air, I stopped its further escape by placing my fingers over the orifice, until this could be properly secured by bandages. Shortly recovering from this disposition to faint, and scarcely complaining of pain, I explored his chest with my naked ear, and in the region of the spot operated upon, I distinguished a dry, crepitous rattle, accompanied by a continued sound as of a rent, or as of something being torn within the chest. This particular noise lasted, and even increased, for some days. Subsequent to the operation, he slept well, with the aid of a composing draught ; his expectoration, as well the œdema of his legs gradually diminished, and for a short period he exhibited every sign of returning health. However, confinement to the house appearing to operate injuriously, it was

resolved he should return to his place of abode in the country, a short distance from town. Here I saw him two or three times, and at first he displayed symptoms of amendment; but subsequently his breathing became troublesome, in consequence of an emphysematous state of his left lung, and of the other's being, from cicatrization of its several cavities, and from compression also, impermeable to air. So great was this compression, proceeding from contraction of his chest, that he became what is termed pigeon-breasted, the thorax being altered to the condition represented in figure 1, plate 4. As a consequence of the hepatized state of the one lung, which occurred a few months afterwards, the circulatory functions were disturbed, and venous congestion gave rise to general dropsy. I recommended abstraction of blood to equalize the circulation, diuretics, and other hydropical remedies, but fruitlessly, he having been, I apprehend, prejudiced against my advice by some neighbouring practitioner. After much suffering he succumbed to this complication of disease, about eleven months from the time of his leaving the Infirmary. I was sent for to examine the body, which I did about twenty four hours after decease. Notwithstanding the

deformity which the chest underwent, there was no perceptible contraction of the affected side, which, subsequent to the operation, had yielded the fleshy sound on percussion. The right lung was one fourth less than the left, and adhered intimately to the costal pleura by well organised cellular tissue, and likewise to the middle mediastinum, which, with the heart, was forced considerably into the right side of the chest by enlargement of the left lung. This lung was altogether emphysematous, remained uncollapsed, and occupied the entire cavity of the left side of the chest. The anterior edge was rounded, and displayed vesicles which were of great size, owing to the union of several air cells into one. The summit of the lung adhered to the chest, developing in its centre the indurated trace of cicatrization; and presented several nodules of tubercles, surrounded by numerous points of black pulmonary matter. In the cavity of the pleura there were above two pints of reddish serosity. On making a longitudinal section of the right lung, its interior, which was flaccid, somewhat fleshy, and of a marbled blue and brown colour, presented cellular lines running in different directions, being the remains of obliterated excava-

tions ; but there was not the slightest vestige of tuberculous formation. The pericardium contained about a tea cup full of serum, and the apex of the left ventricle was unusually prolonged ; a considerable quantity of fluid existed in the peritoneal cavity ; the chylopoietic viscera were much congested ; the kidneys were of remarkable magnitude, and their cortical substance underwent fatty degeneracy.

From a general view of the case, I feel satisfied that this patient might have lived some years, had he submitted to the treatment I proposed to him on his change for the worse.

CASE III.

Consumption, in its very advanced stage, singularly arrested.

—— W., clerk in a counting house, in the city, aged 25, for whom my advice was solicited by Dr. Tuke, the humane and talented proprietor of Sidney House, Homerton, the best regulated private establishment for the insane I have ever visited, had, when first seen by me, been for some months affected with cough, and expectoration of thick yellow sputa. He was extremely pallid, and much emaciated, perspired

profusely at night, and had occasionally been subject to hæmoptysis. It appeared that he had recently lost a brother by the same complaint; this circumstance, as was natural, seemed to prey upon his mind, and depress his spirits; and to so low a condition was he reduced, that he was given over by a respectable surgeon apothecary, who had attended him. On the anterior and upper part of both sides of the chest, I detected distinct pectoriloquism; and this phenomenon, together with a strong gurgling sound most audible in the left side, was clearly perceptible over the whole space from the top of the shoulders to the third rib. From partial indistinctness in the respiratory murmur, without the *râle* of pneumonia on the lower part of the right side, I apprehended that nodules of tubercles were disseminated throughout its lung. I ordered the application of leeches to his chest, with a view to lessen perspiration, and remove congestion and morbid sensibility of the chest; and having described to him the species of apparatus for inhalation I wished him to use, he procured for himself a tube of half an inch in diameter, and furnished with a stop-cock, by turning which he was enabled to increase or diminish the resistance to

the egress of air from the chest. With very little medicine, and that merely to regulate his stomach and bowels, a striking amendment was soon visible, through the beneficial effects of the above mechanical exercise. His progress to recovery being now rapid and decided, I recommended him to repair to the country for a short time, and to continue the plan from which he had already derived such benefit. After some weeks' residence, he returned to town well enough to resume his employment, and exhibited every appearance of health. He had gained flesh in a surprising degree, his muscles were firm and developed, his cough and expectoration had almost left him, and he was—comparatively speaking—a vigorous man. The only time I saw him after his return, I examined his chest, and the result was on the whole satisfactory. Pectoriloquism indeed could still be detected on both sides of the chest: but on the right it was imperfect; on the left, however, it was extensively manifest, though in a less degree than before, and had a metallic sound. From this last circumstance, I inferred that the lining membrane was acquiring a semi-cartiliginous structure; which I have found in many individuals will remain insensible, and be

productive of but trifling inconvenience for a series of years. It unfortunately happened, that at no long period after his convalescence, he was attacked with pleurisy, probably from neglecting himself; and although he survived this latter affection, as I was given to understand, for two months, yet not applying for advice, he ultimately sunk beneath its effects.

CASE IV.

Pulmonary excavation discharging its contents by an opening made in the right side of the neck.

In 1822, a child, nearly two years old, whose father was an out-door patient at the Infirmary, was brought for my advice, labouring under cough, as well as a rare disease, known under the name of pemphigus, which commenced behind the right ear, with the eruption of vesicles, about the size of almonds; and there successively extended themselves some way down the back, and the same side of the neck, discharging acrimonious yellow serum, forming deep pits in the skin. This almost intractable disease yielded, at last, to varied treatment, and the application of an ointment composed of the *scrofularia nodosa*. The part

that had been affected with the disease, healed up like a burned surface, but with several depressions. The delicacy brought on by this disorder terminated in tubercular formations in the summit of the right lung, which finally softened and made a way for itself by forcing a passage under the clavicle—the matter approaching the middle of the neck, in the direction of the cicatrized integuments. Observing that every time the child coughed, a puffing up of this part took place, and that there was air within it, I directed Mr. Sturkey, the intelligent surgeon-apothecary of the establishment at that time, to make an opening here, when there immediately issued a considerable quantity of air and matter, with great relief to the little sufferer. This discharge ceased after some days; but in consequence of the extreme debility, induced by two diseases occurring in a short space of time, the child, originally of delicate constitution, did not survive beyond two weeks. Its death, indeed, was absolutely owing to a complete prostration of vital power, not to be restored, either by nourishing diet or tonic remedies. On examination there were several tubercles in both lungs, but the surfaces of the large cavity were found to be

in apposition, and in more than one point slightly adherent ; affording a proof, evidenced likewise by the voluminous state of the lungs, that had the child lived, it would have triumphed over every consumptive tendency. I must not omit to mention, that the mesenteric glands were so enlarged, as to present a decided obstruction to proper nutrition of the body.

CASE V.

Consumption cured by Paracentesis.

Mr. G. S., aged 30, residing in Norfolk-street, Strand, having experienced several severe losses in trade, fell into a declining state, which ultimately led to confirmed consumptive symptoms. It appeared that about three years previous to my attending him he had laboured under phthisis, from which it would seem that he recovered ; and as I have reason to believe from the occurrence of a bronchial affection, which after a time deserted him. However, meeting with new calamities, he relapsed into his former phthisical condition. At the time he first sought my advice, every sign indicated that his malady had made considerable progress. From the history of his case I

concluded that a secondary eruption of tubercles must have taken place at least eighteen months before, leading from the softening of a tuberculous mass of large size to the formation of a vomica. At times he was sensible of fulness in the upper region of the left side of the chest, as if produced by accumulation of matter in the cavity unable to find an exit; and he would suddenly be relieved by expectorating a quantity of purulent secretion, sufficient to fill a small tea-cup. He could himself distinguish the agitation of the fluid in his chest, when he coughed. On examination with the ear, extensive pectoriloquism was audible, extending from beneath the clavicle to below the third rib, and I distinctly recognized the gurgling of the fluid over the whole of the upper part of the left side of the chest. I succeeded in removing for a time, in a great measure, well-marked hectic fever, and the abundant expectoration was somewhat lessened. The fluctuations from amendment to relapse were frequent, and, among other remedial measures, I advised him to go to the north of England by sea, conceiving that he might derive benefit from the bracing qualities of the air. Remaining there a brief period, he returned to London but slightly im-

proved in health. Convinced that medicine could only afford temporary relief, and being satisfied that his right lung, with the exception of old cicatrization, was sound, and that the inferior lobe of the left lung was in a very satisfactory state, I ventured to propose an operation to him. In spite of the ridicule thrown upon the proposal by a medical acquaintance of his, he reposed such entire confidence in me, that he unhesitatingly agreed to it. Indeed no accident ever attended the operation, as performed by me, except in a case of empyema occurring in my early practice; the particulars of which extraordinary case I unreservedly stated to a medical society of this city. Laennec gives an instance not dissimilar from that which happened to me, since both arose from an unnatural position, in my case, an unheard of one—of an important viscus.

Attended by one of my pupils, I operated with entire success. The trochar was introduced by me between the second and third ribs, in a line nearly perpendicular to the left nipple: very little matter escaped, as I had expected; for my chief object in performing this operation was to ensure the emission of the air, and thus effect a diminution of the cavity by the expansion of

the inferior lobe of the left lung. I kept the punctured place open, for about ten days, by the introduction of a small piece of catgut properly secured externally ; when, finding that the cavity became so contracted, through the encroachment made on it by general pulmonary expansion, as to preclude all further escape of air, I withdrew it. About this time catarrhal affection of the inferior lobe of the punctured side supervened, and I could tell by the ear, that the pulmonary tissue, in the summit of the same side, was undergoing expansion. In less than two months my patient was able to go out, and had completely lost all his phthisical symptoms. In less than two years after the operation he was in the enjoyment of excellent health, the only drawback being the existence of catarrh, to which he more immediately owes his recovery.

CASE VI.

Consumption cured by suddenly Supervening Emphysema.

A young lady, daughter of a highly respectable tradesman in Little Britain, long subject to a nervous disorder, for which various advice had been taken, without permanent effect, became

consumptive. Her decline was, in my opinion, brought on by the too liberal and prolonged use of medicine. After long manifestation of the various symptoms of phthisis, it was proposed to me to meet in consultation a physician, belonging to one of the metropolitan hospitals. The view of the case taken by this gentleman was so unfavourable, that he unhesitatingly gave it as his opinion to her parents—she could not survive six weeks. Careful exploration, however, of the summit of the left lung, where I suspected the presenec of a cavity, convinced me of the probable error of his conclusion. This belief, on my part, originated in my detecting decided indications of emphysema from a dry crepitous rattle, with large bubbles, manifested by auscultation. This emphysematous state, I conceive, arose from a spasmodic attack of the throat, so violent as almost to produce suffocation. From this circumstance, combined with the suddenness of the emphysema, I inferred that a rupture of several air cells had taken place, and that in time cicatrization would be effected through the consequent pulmonary dilatation. Nor did my conjecture prove erroneous, since, though three years have nearly elapsed from the period of which I am

speaking, I am most happy to state that this young lady is not only living, but is in the enjoyment of excellent health.

CASE VII.

Consumption cured by Neglect.

A silversmith, when in good health and circumstances, and nearly fifty years of age, was exposed to one of the most terrible of all paternal inflictions, the misconduct and subsequent legal punishment of his son. The young man, having formed dissolute connections, had been persuaded to pass a forged note ; and, on the fact being proved against him, was sentenced to transportation. The disgrace thus brought on their hitherto unimpeachable family operated so powerfully on the feelings both of the father, and of a daughter just entering into life, that their distress and agony of mind at last entirely undermined their health. The debility, thus induced, terminated, in each of them, in consumption. After a few months' illness, the daughter died ; and the father after extreme suffering, both of body and mind, having apparently reached the verge of the grave, and being indeed so utterly reckless of life, which he

regarded only as a burthen, as to neglect not only recourse to medical advice, but even common care of himself, yet recovered, and survived for many years. It was fully seventeen years subsequent to this seemingly miraculous recovery, that I attended him on the occasion of his being seized with an apoplectic fit, resulting, as I afterwards had reason to believe, from valvular disease of the heart. During his convalescence from this attack, he was unfeelingly taunted by some brute in human shape with his son's disgrace ; and so wounded and humiliated did he feel by this unworthy allusion, and so deeply did it sink into his mind, that I entertain no doubt it accelerated his death. It was during my attendance on him, that learning from his wife his previous consumptive state and recovery, and perceiving that he laboured under a bronchial affection of long standing, I at once attributed the return to health, which she regarded as so strange, to the ingression of catarrh on phthisis. The post-mortem examination verified my conclusions : it presented well-defined cicatrizations, especially on the summit of the right lung ; nodules of tubercles, yellow and opaque in the centre, and rendered inert by the secretion of black pulmonary matter in the

surrounding tissue; and the lungs were voluminous and distended with air. I will venture one observation on this case, which although it may appear harsh, regard for truth and the advancement of medical science compel me to make—namely, that had this person, when reduced to a phthisical state, recurred to medical advice, the probability is the bronchial affection, which was his safeguard, would, as is but too frequently the practice, have been interfered with, its value being unknown to the profession, and his life consequently shortened by many years.

CASE VIII.

Consumption spontaneously cured.

Miss M——, about 23 years of age, a lady of great personal attractions, and highly-cultivated mind, consulted me in the summer of 1826 for symptoms of confirmed consumption; for which she had already enjoyed the benefit of Mr. Howship's advice. It was arranged that I should visit her in conjunction with this talented surgeon, and we continued to attend her for several weeks. In all the cases I have witnessed, I never met with such distressing, racking, and

perpetual cough. We tried every method of relief we could possibly devise, and administered sedatives of every description, but without effect. Her disorder, instead of receiving mitigation, evidently increased; and not only were the fears of her friends awakened, but we ourselves began to despond. At this crisis, through the importunity of some near connections, her mother was persuaded to try the advice of an individual who, although I am not aware that he had received a regular medical education, enjoyed some notoriety. On receiving a delicate intimation to this effect, and being of course inclined to humour the natural anxiety of a parent, we agreed, that it might not be totally *infra dignitatem* of us, the more legalized authorities, to hear what this person might suggest, although a formal consultation was out of the question. To do him justice, we found his opinions sensible, and much to the purpose; but he considered the condition of the patient as so hopeless, that he declined interfering with the case. Yet, notwithstanding these grave prognostics, the young lady, to our great satisfaction, soon after this began to exhibit signs of amendment. Her health was gradually restored, and continues, I believe,

unimpaired up to the present time. From my further experience, and from cases which have subsequently come under my notice, I entertain no doubt that the cough I have already alluded to, and which was of a convulsive character, like that of the whooping cough, must have produced a rupture of the air cells, which caused infiltration of air into the pulmonary partitions. This variety of emphysema, similarly to the vesicular, renders, while it lasts, the lungs voluminous, and when happening in the neighbourhood of the diseased summit of the lung, would naturally bring the surfaces of any excavation into contact. Indeed, although from my reluctance to put the patient to inconvenience by examining the chest in the latter part of her illness, I could not positively affirm the existence of emphysema, still all my reflections on the case lead me to the belief, that she is in no small degree indebted for her cure to a cough, which in general would be considered highly injurious, and in fact appeared so to me at the time.

CASE IX.

Remarkable influence of the protective effect of Bronchial affection.

I offer this case as one instance out of many,

equally as desisive, which I could adduce, of the value of catarrh in preventing pulmonary consumption. An eminent publisher of Paternoster-row, all whose brothers and sisters have been the prey of consumption, is himself subject to asthma, induced by a catarrhal affection of the chest, contracted in childhood. The gentleman, to whom I allude, is at present about fifty years of age, of a ruddy, healthy complexion, expanded chest, and excepting occasional inconvenience experienced from the above constitutional complaint, he enjoys life in every respect. It is but fair then to infer that since, out of a numerous family, he is the sole member who has escaped phthisis, this singular exemption has been owing to what might to a superficial observer appear an inflection, but which is really in this instance a providential dispensation—namely, asthma.

Being thus naturally led to the subject, I take the opportunity of explaining a very remarkable phenomenon exhibited in the offspring of consumptive and asthmatic individuals. That consumption is hereditary, I have already noticed, but an additional confirmation not only of this fact, but of the truth of the opinions I have given on the preventative nature of catarrh, may be found in

a circumstance, often noted by me—that when a consumptive individual becomes asthmatic, the children, born prior to the supervention of asthma, exhibit a phthisical diathesis; whilst those who are born subsequently are entirely free from any consumptive tendency. Exceptions may undoubtedly be met with, the result of some strong exciting cause, but, generally speaking, the rule will be found to hold good; the exception, indeed, will substantiate it from the resistance, in such cases, offered by nature to the inroads of Consumption.

CASE X.

Complication of Disease ending in Phthisis.

C. L., aged 50, the matron of a medical institution, and consequently having the best advice within her reach, being visited by several eminent medical men, was for some months subject to distressing uneasiness and irritability of stomach, which prevented the due retention of food. It being supposed that she laboured under a cancerous affection of this organ, various palliative expedients were resorted to. Her health, however, declined, and she became subject to frequent

cough, from which she had hitherto been free ; to shortness of breath, purulent expectoration, much emaciation, hectic fever, and night sweats. After great suffering for a lengthened period, she sank under this seemingly double affection of the stomach and the chest. On examination, however, of the body, the cause of this train of disease was discovered to be a polypus of the womb, which had considerably enlarged it, and had undoubtedly excited that morbid sensibility of the stomach, which, deranging the general health, induced phthisis. The only remarkable appearances, presented by the stomach, were several small opaque glands in the mucous surface near the pylorus. The lungs were excavated, and tuberculous ; and exhibited marks of inflammation in various places. I have introduced this case to prove the justness of the views I have taken in the preceding portion of this work, with respect to the fatal supervention of phthisis on general debility, when unchecked by catarrh, or mechanical expansion of the chest. Had inhalation been early employed, the disease would have been at once arrested ; and the patient might have lived until the appearance of the polypus through the external opening of the womb would have at-

tracted notice ; when means might have been adopted for its removal.

I have by me numerous cases in which Consumption has fatally supervened on diseases, both of a curable and incurable kind ; but their description could only confirm what I have already, I trust, established.

CASE XI.

The protecting influence of Catarrh, supervening on Consumption, exemplified.

Mrs. H——, the wife of a gentleman attached to the Bank of England, who had been under the care of a lecturer on midwifery at one of our largest hospitals, without relief of her consumptive symptoms, applied to me about ten years ago. She suffered from hectic fever, spitting of blood, and, in short, exhibited all the well known symptoms of phthisis. At this time, my views of the treatment of Consumption were not matured. However, I succeeded in rendering her disease chronic ; and soon after this change was effected, a bronchial affection supervened. Until the pulmonary cavity was perfectly healed, she was liable, at long intervals, to sanguineous

expectoration ; and her health consequently exhibited occasional fluctuation. During one of these temporary relapses, she consented, in order to oblige a friend, whose importunities were unceasing, although at the same time her confidence in me continued unshaken, to apply to a physician, whose interest had obtained for him the honour of prescribing for royalty. This gentleman shook his head at her case, to the great alarm of my poor patient, and in most melancholy mood assured her friend that she was a doomed woman. Full of consternation at these dismal prognostics, Mrs. H. hurried to me, and revealed, after apologising for the seeming want of trust in me, this tale of horrors. To her amazement, the more she dwelt on the gravity and misgivings of the said physician, the more were my risible faculties excited ; and while she talked of death, I was convulsed with laughter. I soon reasoned her out of her fears, and carefully putting the prescription by, she proceeded in better spirits, from my assurances, to order mine to be made up. The usual results, attendant upon catarrh in pulmonary consumption, were not belied in her case. She is at this moment ever ready to join in the laugh with me at

her former trepidation ; and is one, out of hundreds of instances that have passed under my observation, of the cures effected by the interposition of nature herself.

CASE XII.

Consumption cured by exposure to cold, and want of faith in medicine.

Mr. D—, aged 24, through irregular habits, had so materially impaired his constitution, as to fall in consequence into a decline. He, of course, availed himself of the benefit of medical advice, which produced no very visible amelioration of his state of health. Being naturally of active habits, he grew impatient of the confinement to which he was subjected, and, tempted by the return of spring, he suddenly deserted his heated apartment, and determined, since he concluded he must die, to die in the manner most agreeable to himself. Accordingly he betook himself to his favourite sport of fishing. This was in the month of March, a period at which easterly winds are most prevalent. The worst consequence of this apparently rash exposure was, that, after a time, he caught cold, which,

as it would appear, was confined to the trachea. His respiration was sensibly affected, and he laboured under a distressing fulness of the chest. He continued subject to this affection, with an apparent increase of the violence of his disorder; but he still rejected all care and medicine, and persevered in going out. After some period, he began to exhibit signs of amendment; he gradually lost his emaciated appearance, acquired flesh and bodily vigor; but was much annoyed by wheezing of the chest, and loud rattle in his throat. He had remained in this state for some months, when he applied to me. On examination of his chest, and hearing a detail of his complaints, not only from himself, but from the gentleman under whose care he had previously been, I at once perceived that he was indebted for his recovery from consumption, to this catarrhal state of the trachea. I may here observe, that recoveries of this kind are more frequent among the lower, than the other classes of the community; owing, doubtless, to what may at first appear a misfortune, but is to the consumptive patient, in numerous instances, a blessing—exposure to cold!

CASE XIII.

Case of Consumption relieved by Inhalation, and detailed by the Patient himself.

JOHN EALES, compositor, aged 40, was affected in the month of July, 1833, with a violent consumptive cough and hectic fever; so much so that the phlegm was coated with blood and afterwards followed a great quantity of clear blood for about ten minutes, which caused my health and strength to decline very fast, and my system was very much reduced, so that it was with great perseverance and suffering I was enabled to keep to my employment. Having applied to Dr. Ramadge under this extreme suffering and danger, he ordered me to inhale hops through a tube about four feet long, and by inward medicine and outward application of bleeding, I soon found myself improving very fast, and I am happy to say that I am entirely out of danger, and free from internal bleeding, and any appearance of consumption.—Jan. 13, 1834.

To the above cases, which bear a slight proportion indeed to the number I have at this mo-

ment lying on the table before me, detailed as well by the thankful patients themselves, as minuted by me, I subjoin two letters from medical gentlemen, illustrative of the happy results of pulmonary expansion. The first of these stands in need of no other explanation than my observing that the writer has omitted, that, on exploration of the chest, the physical signs of consumption were distinctly marked.

“DEAR SIR,

“In compliance with your request, I beg to give you the following statement relative to my health.

“In the winter of 1832 I was troubled with a cough, after which my health continued indifferent, and in the month of May last I had a violent attack of pain in my chest, for which a blister was applied and medicine taken, apparently with good effect; but in about eight days the pain returned with increased severity. After being twice bled copiously from the arm, and the local application of leeches and a blister, the pain was allayed, so as to allow of free respiration. I was now, of course, extremely weak. In about four weeks the pain again returned in my chest. Leeches and blisters were repeatedly applied, without effecting its removal, and although the general state of my health was of course attended to, my strength of body soon so much decreased, that it was thought I should not recover. Under these circumstances, I applied to yourself in July, and am happy to say that under your skilful treatment I soon began to amend, and that for the last two or three months I have entirely left off taking medicine, being now stouter and stronger than before the

commencement of my illness in 1832. I have been for some time without any cough.

" Hoping these particulars may be useful to you, believe me to be,

" Dear Sir,

" Your much obliged, humble servant,

" CHARLES ROSE.

" P. S. I omitted to mention that I still continue inhaling.

" Beaumont-square, Feb. 5, 1834.

" To Dr. Ramadge, Ely-place, Holborn."

The following is an extract from the letter of a medical gentleman, who has done me the favour of consulting me on a case of advanced consumption, submitted to his care. He bears, I am happy to say, this powerful evidence to the virtues of inhalation.

" To Dr. Ramadge, Ely-place.

" MY DEAR SIR,

Rye, Feb. 17, 1834.

* * * * *

" I am sedulously using all you have recommended, and, whatever may be the termination of the case, more benefit has been received from the plan you have mentioned, than any I have ever tried, or known recommended.

" Yours very truly,

" F. H. WILSON."

It has so happened that within the last twelve months I have had four cases of consumption in medical men ; and it is most gratifying to me to state, that the result, in each instance, has been satisfactory.

EXPLANATION OF THE PLATES.

PLATE I.

FIG. 1. displays a section of the upper lobe of the lung, taken from a person who had, many years preceding death, recovered from consumptive disease, but had died asthmatic. Like most lungs of the kind, it exhibits, on the summit, adhesion of the two pleural surfaces; and an emphysematous state is indicated by large transparent vesicles, full of air, formed by the rupture of several air cells into one. The semi-cartilaginous external wrinkling, or pursing, is the mark of internal cicatrix. The size to which this lung had attained is not shewn by the drawing, frequent handling having compressed it.

a. A portion of the pleura costalis.

b. The point of adhesion between the pleura pulmonalis and the pleura costalis.

c. c. Large air vesicles, the products of imprisoned air, chiefly arising from bronchial affection.

d. External wrinkling, the result of internal cicatrix.

e. Black pulmonary matter, in unusual quantity, seen through the serous surface of the lung.

FIG. 2. Represents an old excavation with semi-cartilaginous lining; and the marks of cicatrization both fibro-cartilaginous and cellular; also ancient crude tubercles surrounded by black pulmonary matter. The individual from whom this superior portion of the lung was taken had had consumptive disease arrested, more than six years previous to his death, which was occasioned by apoplexy.

a. Emphysematous vesicles.

b. Chronic pleurisy, with jelly-like effusion beneath it.

c. A line passing through semi-cartilaginous, as well as cellular, cicatrizations.

d. Tubercles, of long date, in a state of crudity, and in the midst of widely diffused black pulmonary matter. There are two smaller tubercles above the horizontal cicatrization.

e. The lining membrane of an ancient cavity.

f. The semi-cartilaginous lining of the same cavity.

g. Passing over an external wrinkling, and terminating in the opening of a bronchial tube.

h. Shews the bottom of the section of the lung, and the dissemination of black pulmonary matter.

PLATE II.

FIG. 1. Shewing a section of the summit of the lung, with the partially complete cicatrix of a tuberculous excavation. The preparation from which the drawing is taken, is part of the lung of a cured consumptive person.

a. Large tuberculous nodule, environed by black pulmonary matter.

b. Indicates the point where adhesion is completed.

c. Opening of the trachea, the lung inclining forward.

d. Vesicles, generally seen in cured consumptive cases.

e. External depression, the sign of cicatrix.

f. Edge of the section, resting on black pulmonary matter.

FIG 2. Another summit taken from a cured consumptive individual.

a. Small excavation of long standing.

b. Crude tubercles.

c. Black appearance of the lungs from inordinate secretion of black pulmonary matter.

d. Semi-cartilaginous corrugation of the exterior surface.

e. Calcareous deposit, lying loose, having fallen out of an imperfect cicatrix. Another may be seen above, in the line of cicatrization.

PLATE III.

FIG. 1. A section of a lung, lengthwise, taken from a young man, who died eleven months after the operation of paracentesis. His case is the second described in the Appendix.

a. Represents well-organized cellular tissue, with a portion of the pleura fibro-cartilaginous.

b. Dense cellular tissue, of a whitish colour, in a few places semi-cartilaginous, running in various directions, formed by the adhesion of several excavations.

c. A broad cicatrized band.

c. (On the right side) Cicatrization all but complete.

d. Apparent thickening of the pleura investing the lung.

e. A bronchial tube, opening into an incomplete fibro-cartilaginous cicatrix.

FIG. 2. Apparatus for inhaling, to be two-thirds filled with warm water.

a. Air-vent.

b. Flexible tube, inserted into the cover of the inhaler.

c. Flexible tube, of narrow diameter, furnished with ivory mouth-piece.

PLATE IV.

FIG. 1. Figure of a young consumptive patient, who underwent paracentesis, which operation was followed by considerable reduction and impermeability of the right lung. Instead of contraction of this side taking place, through the

emphysematous enlargement of the opposite lung, and the unnatural intrusion of the heart into its cavity, the anterior part of the chest assumed that peculiar deformity which is denominated pigeon-breasted. Contrary to the opinion of Laennec, even in cases of empyema, in which, after long compression of the lung, recovery has taken place, I have more than once seen, instead of lateral contraction, which he concludes to be the common result, the appearances portrayed in the annexed drawing.

a. Unnatural elevation and squareness of the shoulders.

b. Pigeon-like deformity of the chest.

FIGS. 2. and 3. represent two lungs taken from an individual, who underwent spontaneous recovery from consumption, and whose chest was deformed in the manner shown in the figure above. Fig. 2. represents the right lung highly emphysematous. An induration in its apex is omitted in the drawing. Fig. 3. shows the left lung, one-third less than the right, and semi-solid. On making a longitudinal section, this lung displayed appearances nearly similar to those seen in Plate III. I am strongly inclined to believe, that interlobular emphysema took place in this instance, from violent coughing; and that air extravasated into the surrounding cellular substance, forced the several cavities into apposition.

Fig 1

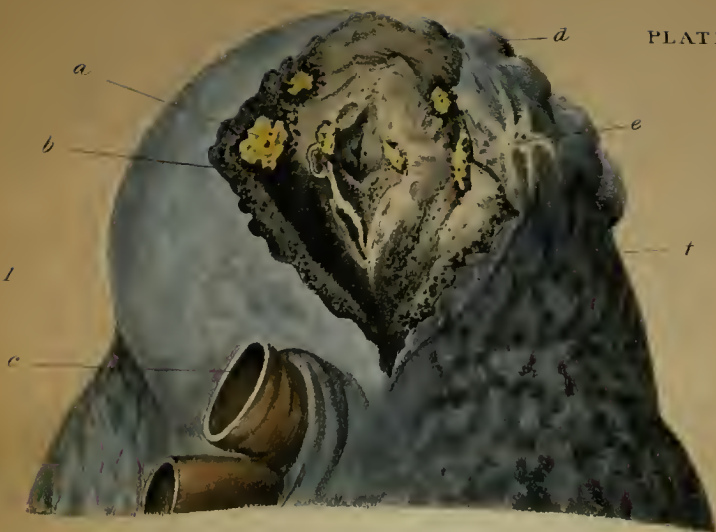


Fig 2.





Fig 1



Fig 2



Fig. 1.

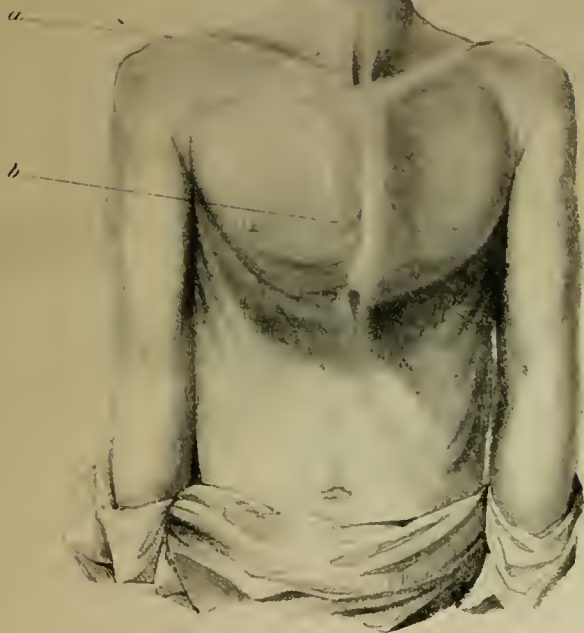


Fig. 2.

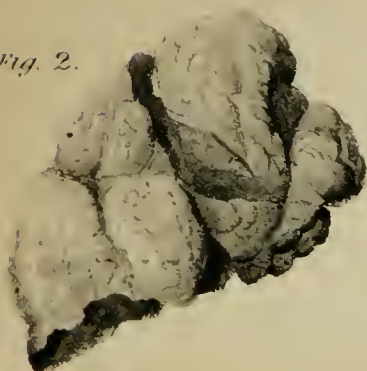


Fig. 3.



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